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Virginia Marketing Code May be Step Toward National Standards

By Roger B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, Jan. 17

TWO proposals for a code of ethics covering the marketing of petroleum products in Virginia are before the Federal Trade Commission. A report is expected from the commission within the next few weeks.

There is belief that any code that wins the commission's approval may become the moral standard governing the marketing of gasoline, kerosene, and other products throughout the United States, or at least in the states where the signers of the Virginia code distribute.

While the code was drawn to govern conditions in Virginia only, many believe it is hardly possible that conditions it prescribes can be followed only in that state by two major companies, the Standard Oil Co. of New Jersey and The Texas Co., who took part in drafting the code, and ignored in the rest of their marketing territories. Neither representatives of the two companies nor of the commission will say at present how widespread they believe application of the code may be.

One of the proposals is that of a majority of the committee of Virginia distributors, representatives of major and minor companies, which was headed by E. A. Holbein, director of the Standard Oil Co. of New Jersey. The representatives of the Virginia Independent Oil Men's Association concur in this report. The minority proposal was submitted to the commission by William Thompson, a member of the code committee and district manager of The Texas Co.'s Norfolk district.

Posting of prices at service stations, curb pumps, and bulk plants is recommended in the code of the majority of the committee with no discrimination in prices between consumers. Coupon books must be sold and redeemed at face value. There shall be no gifts or bonuses on opening or special sale days. Lotteries, wheels of fortune and games of chance must not be used in connection with sales of gasoline and motor oils.

GASOLINE pumps and tanks and motor oil vending outfits may be loaned or leased for the exclusive handling of products of the lender or leasor, but no other equipment, or money to buy other equipment, may be loaned. Service stations may be rented or leased to an operator only at fair market value; and in no case shall a property leased from a station owner be sublet to him for less than that paid him or at a fair market value should the real value fall below the value when the lease was taken by the refiner or jobber.

A differential of not more than 1 cent shall be allowed a dealer who does his own trucking from a bulk plant. There shall be no deliveries from tank wagons or trucks into the fuel tanks of any motor vehicle.

The code concludes with this formidable reservation:

"The companies participating in the conference reserve to themselves the right to meet competition and to do so by employing the practices herein condemned or otherwise."

The conference referred to was the meeting of the representatives of major companies and the Independent marketers under the observation of E. A. McCulloch, a member of the Federal Trade Commission, in Richmond last May when the subject of a code was first taken up formally.

It is understood that there was an agreement between The Texas Co. representative and representatives of other companies on the committee which drafted the code on all points except the cancelling by that company of certain "lease and license contracts" already in existence. In its form of dealer agreement, The Texas Co. leases station properties from owners and then sublets them to agents on any terms it desires to make.

The copy of the code published herewith in tentative form provides that the oil company cannot sublease or license properties for less than that paid the owner by the oil company. A clause in a preliminary draft on this point was:

"Nothing in this clause shall be construed as affecting existing contracts but shall apply to all licenses, leases or subleases or renewals." Evidently *new* leases and other commitments were in the drafters' minds but were not so stated. The commission may insert this clause or a similar one into the code before it is approved and promulgated.

MORAL enforcement is the best that can be expected for the code. No penalty can be levied directly by the Federal Trade Commission. Complaints of violation of the code can be placed with the commission and a summons issued by the commission calling on the company or person complained of to show why a cease and desist order should not be issued against the company or person

accused of unethical trade practices. Three classes of practices may be complained of: those in restraint of trade, those against the public interest, and those that are unfair to competitors.

After a summons is issued the commission may set a hearing. If the commission deems the practice unethical a cease and desist order may be issued. If the company or person persists in the practice the commission may petition a United States circuit court of appeals to enforce the commissions order. Should the plea be sustained the company or person against whom the order was issued would be subject to contempt of court proceedings. If it continued to indulge in the unfair practices. It has the right to appeal to the United States Supreme Court.

On the other hand if the company or person against whom a cease and desist order has been issued believes the order to be unjust but wishes to maintain good legal standing it may petition a U. S. circuit court of appeals to have the order dissolved. The commission, in a case like that, would be the defendant instead of the plaintiff.

Such an appeal was made by oil companies several years ago when the Federal Trade Commission issued cease and desist orders against companies that lent gasoline pumps and tanks to their dealers. Appeal was made by the independents through Chamberlin & Fuller, attorneys of Cleveland and the order was dissolved but not until the Supreme Court passed on it. The case was argued by Judge C. D. Chamberlin, who then was also general counsel of the National Petroleum Association.

Should a distributor persist in violating an order that had been upheld by the courts and be found guilty of contempt, the penalty may be anything the court may think discreet. The law does not specify a penalty.

Codes of ethics approved by the Federal Trade Commission are not new. They have been approved by the portland cement, gypsum, and more recently the insulating lumber industries. These govern claims made in advertising and sales talks and literature.

If the commission approves the code as drawn by the Virginia committee of oil men it will be following its regular proceedure of promulgating practices which are first drawn up by an industry, or a portion of an industry, as representing fair trade ethics. The commission has no authority to enforce the code, except to issue cease and desist orders when specific complaints of violations are brought to its attention.

Tentative Draft of Virginia Code of Fair Marketing Practices

1—*Retail Prices:*

Operators of service stations, filling stations, curb pumps and bulk plants serving consumers must conspicuously post the prices at which gasoline and motor oils are sold. Gasoline and motor oils must be sold to all consumers at the posted price. There shall be no discrimination in prices between consumers.

2—*Coupon Books:*

Coupon books, if used, must be sold and redeemed at their face value without any discount.

3—*Gifts or Bonuses:*

No oil or other thing of value shall be given away on opening days or on special sale days.

4—*Lotteries:*

Lotteries, prices, wheels of fortune and other games of chance prohibited by the Virginia Law must not be used in connection with sales of gasoline or motor oils or at the places where gasoline and motor oils are sold.

5—*Loaning or Furnishing Equipment:*

Gasoline pumps and tanks and motor oil outfits may be loaned or leased for the exclusive storage and handling of the products of the lender, but the borrower shall not be prohibited from handling in other equipment the products of another supplier. The borrower or lessee shall be required to pay the actual cost of installing of loaned equipment and shall pay all privilege taxes attaching because of the installation or maintenance of such equipment. Wholesalers shall not construct for retailers any driveways, canopies, sheds, buildings, do painting, make improvements to existing structures or facilities, nor furnish or loan air compressors or other things of value except gasoline pumps and tanks and motor oil outfits, nor loan money for the same.

6—*Wholesale Prices:*

All refiners, distributors, jobbers and wholesalers making tank wagon deliveries shall conspicuously post, at each place from which such deliveries are made, the price for gasoline and kerosene delivered by tank wagon. All gasoline and kerosene must be sold at the posted price. The wholesaler must not grant any rebate, concession or discount from the posted price nor pay any rentals for the privilege of installing pumps and tanks or for displaying advertising.

7—*Leases and Rentals:*

Refiners, distributors, jobbers and wholesalers owning or controlling by lease or otherwise service stations or filling stations or land or buildings suitable therefor shall not lease, license, sell or permit same to be operated for the sale of gasoline or motor oils unless a rental or price equal to the fair market value is received therefor.

8—*Leases and Licenses:*

When refiners, distributors, jobbers and wholesalers acquire leases of service stations or filling stations, such stations shall not be sub-leased or the operation thereof licensed for a rental or charge less than that paid to the owner, provided, however, that when the value of the site for service station or filling station purposes has decreased below that existing when the lease was taken, the rental or charge therefor shall be equal to the fair market value of the property.

9—*Purchase or Rental of Equipment:*

Refiners, distributors, jobbers and wholesalers shall not rent from any dealer or consumer any delivery-equipment and shall not purchase from any dealer or consumer any delivery equipment for more than its actual value.

10—*Bulk Plant Deliveries:*

Deliveries of gasoline at wholesale plants into tank wagons or trucks operated by or for the purchasers thereof is discouraged because of the fire hazard involved. When such deliveries are made, the price should be such differential under the posted tank wagon price as represents the cost of handling, by the purchaser, but such differential should not exceed one cent (1c) per gallon.

11—*Tank Wagon Deliveries to Motor Vehicles:*

Deliveries should not be made from tank wagons or trucks into the fuel tanks of automobiles or other motor vehicles.

12—*Date Effective:*

This agreement shall become effective on the ..... DAY OF ....., 1928.

The foregoing Code covering trade practices in the marketing of petroleum products in Virginia is the result of a careful study of all phases of marketing conducted at Richmond under the auspices of the Federal Trade Commission. The companies and dealers who participated in the conference are disposed to follow this Code as long as it is lived up to by all marketers. Consequently, it is necessary that all marketers adhere to the rules set forth. The companies participating in the conference reserve to themselves the right to meet competition and to do so by employing the practices herein condemned or otherwise.

Fire Marshals Study to Reduce Hazards By Better Refinery Construction

By Paul Truesdell
N. P. N. STAFF WRITER

PITTSBURGH, Jan. 12

THE Fire Marshals' Association, of the National Petroleum Association, at its third annual meeting held in the William Penn hotel here today, set for itself two important tasks to carry out during 1928.

One is a comprehensive study of possibilities for fire prevention through the use of the proper materials, construction methods and equipment in refineries and best methods of fighting fires when they occur.

The other is the extension of the work of the association to cover accident prevention — safety first — as well as fire prevention.

The association selected, to carry out the ambitious program it has set for itself, the same officers who guided its work last year. These are James H. Herbert, Conewango Refining Co., Warren, Pa., president; James Sweeney, Viking Oil Co., Warren, vice president and S. R. Brown, Mutual Refining Co., Warren, secretary. The re-election of these officers was unanimous.

The program for the study of fire hazards, fire prevention and fire fighting methods mapped out by President Herbert at the meeting today is probably the most comprehensive and far reaching ever attempted by any association along this line. Some individual companies, especially the larger ones, to be sure, have made a careful study of fire causes and prevention of fire loss as far as their own particular plants are concerned, but this is the first time, so far as known, that any association made up of representatives of many companies has taken up this work in a cooperative way for the benefit not only of their own members but of the entire industry as well.

AN IDEA of the scope and importance of the work can be gained from the fact that it is divided among the five groups which make up the fire marshals' association, each group being given several definite topics to work upon. The topics are assigned as follows:

Oil City Group

Fire brigades, their organization and training; lightning hazards and how to avoid or minimize them; proper vents on tanks and safety relief valves on stills.

Bradford Group

Refinery construction; protection for steel beams; fire walls, etc.

West Virginia Group

Pipe lines in the refinery including pipe line supports, where elevated, and their protection from fire.

Pittsburgh Group

Hazards arising from gas and specific cracking still hazards.

Warren Group

Fire fighting systems and methods including steam and water, soda and acid and so forth; electric lighting conduits, fixtures etc. in the refinery.

Each group is to make periodical progress reports on its work at stated meetings as the results of their studies justify, and each group is to make a full report on its topics at the fourth annual meeting of the association next year at this time.

THESE reports are expected to furnish more real information on the many phases of fire hazard from various causes, fire prevention and fire fighting than ever before has been available to the industry and also to provide material for a code of safe practices for refinery construction and operation that can be adopted by insurance companies and serve as workable and reasonable standards for setting insurance rates. The reports of these groups will certainly be watched for with interest by refiners everywhere.

The meeting today was called to order by President Herbert. E. M. Lyons, Tiona Refining Co., president of the National Petroleum Association, was the first speaker. Mr. Lyons commended the fire marshals for their good work. He stated that their organization is unique in the business in its purpose. He suggested that they could increase their usefulness by working for safety in other respects as well as safety from fire.

Their constant vigilance around refineries to detect fire hazards has made them observant generally so they can, with equal readiness, detect other sources of accident hazard so these may be corrected before anyone is hurt, said the speaker.

Mr. Herbert in his remarks pointed out that this is the first meeting of the Fire Marshals' Association that finds the members really acquainted. At the first meeting, three years ago, he stated, many members even from neighboring refineries in the same district did not know each other and at the meeting last year they were still far from being well acquainted. Now they call each other by their first names and have learned to work together.

Fire prevention work is merely in its infancy, the president told the members. He likened their work to a football game. Their organization, he said is one of the teams in the game and fire is the other.

THE team is handicapped by not knowing how many men fire has on his side. Also by the fact that there is no time out. They have to be ever on the alert to keep fire from getting the ball if possible. Sloppy conditions in a plant run interference for fire.

He pointed out that accident prevention work in general goes hand-in-hand with fire prevention.

"While every accident hazard is not necessarily a fire hazard," he said, "every fire hazard is an accident hazard. While we are looking for the one sort of hazard in the plants

Accident Prevention, Also

THE Fire Marshals' Association of the N.P.A. is a unique organization in the oil industry. Its members, whose services are entirely voluntary, have organized fire fighting brigades in their own plants, and they also meet regularly and inspect as a group for fire hazards, the various plants represented in their association.

They now plan a more pretentious program; to carry on accident prevention work as well as fire prevention and also to study refinery construction from the point of view of fire protection. In the future, as a result of their work, which will be of value to the entire industry, specifications drawn up for construction of refinery plants and equipment, may include provisions especially designed to minimize fire danger.

we are inspecting we can also look for the other as well."

James Sweeney, vice president of the Fire Marshals Association, read a paper on fire brigades and their organization in individual plants.

A fire marshal may be ever so efficient in fighting a fire when he is on the job, but he has not done his full duty unless he has organized and trained a fire brigade which knows just what to do in case of fire when the fire marshal is not at hand to direct them, the speaker pointed out.

"Men, even experienced refinery men, often lose their heads in an emergency and are almost worthless as fire fighters," he said. "Men must be trained in their duties, specifically instructed in just what they are to do in case of fire. Some one man should be made responsible for directing the fire fighting in the absence of the marshal.

THIS training can only be given by fire drills held regularly, once a week or once a month at least, he said. He stated he knew of a plant where fires were a frequent occurence but they seldom caused much damage. The men in that plant got to be expert fire fighters through frequent fighting of real fires. "But training men by having them continually fighting real fires is an expensive method," he asserted.

Mr. Sweeney brought out another point often passed over and that is that frequent fires in a refinery not only shake the confidence of stockholders and insurance companies in the oil industry generally but they also frighten the townspeople owning property near the refinery and lead them to look on the plant as a source of danger to the community. If fires are few and always well handled, the public is likely to look more favorably upon the refineries in their community.

Mr. Sweeney's remarks on fire brigades aroused considerable discussion, M. J. Glynn, superintendent of the refinery of the Emlenton Refining Co., Emlenton, Pa., stated that he has a fire brigade at his plant which had proved itself by quickly conquering two fires that broke out when he himself was absent from the plant. Mr. Glynn said his plan of fire brigade organization leaves sufficient men on the stills and other equipment to take care of them, sending to the fire only the men who can be spared.

J. B. Northrop, superintendent of the Ohio Valley Refining Co., St. Mary's, W. Va., stated that his fire brigade organization is such that certain men go to the fire instantly, leaving others in charge of the equipment. The men left behind slack all still fires, close all doors and windows putting everything in safe condition, and then they too turn to and help the fire fighters. One important thing, several agreed, is to keep curious townspeople from crowding into the refinery when a fire is on.

HOUSTON DUNN, secretary and treasurer of the National Petroleum Mutual Fire Insurance Co., Philadelphia, stated that, in 32 years of experience during which he has inspected thousands of industrial properties of various sorts, he has never in any other industry met with any such organization as the Fire Marshals Association of the National Petroleum Association.

No business man, regardless of insurance, he said, can afford a fire and still less can the employes of the business afford it. It means a disturbance of commerce, employes lost work and there is distress all around. To struggle to prevent fire to the greatest extent possible and to use the utmost intelligence in fighting it is the part of self preservation for business man and employe alike, he stated.

He also pointed out that one of the most important services the fire marshals could perform for the plants they represent would be to formulate rules of safe practice that could be taken by the insurance companies as a standard. He stated that an attempt is being made now by the insurance companies to separate the sheep from the goats, meaning those plants kept in good condition from a fire protection standpoint from those which are not, so as to adjust rates on the basis of giving preference to the well kept plants. This would inevitably lead to setting up standards of practice in refinery construction, maintenance and operation, he stated. If the fire marshals, who understand refinery conditions and requirements studied the matter and formulated good rules and standards, he said that such a code might well be adopted as a whole by the insurance companies. However, if there were no such code available and the underwriters themselves were forced to formulate one, it would be likely to be exceedingly burdensome, and needlessly so, on the oil industry. It is expected that the study and reports of the groups of the association already referred to will furnish the basis for such a code.

Mr. Dunn stated that fire prevention officials of the province of Ontario stated in a bulletin put out by the Dominion government that 77 per cent of the fires in the dominion were caused by carelessness. He said he would go this statement one better and say that 99 per cent of the fires in the oil business could be prevented.

There was considerable discussion of the foam system of tank fire fighting, including the most economical piping system to carry the foam to all tanks, methods of applying the foam effectively to the surface of the burning oil and so on. The system worked out by H. H. Hall, chief engineer, and his associates of the Standard Oil Co. of California was discussed at length.

This method was described in a paper by Mr. Hall at the Tulsa meeting of the American Petroleum Institute in 1926 and was published in NATIONAL PETROLEUM NEWS page 48-A, Dec. 15, 1926 issue. It was announced at the meeting that the Standard of California had applied for patents and the method would shortly be available to the industry at large.

Mr. Anderson of the Sun Oil Co., refinery Toledo, and J. C. Mullhaupt and Frank Philippbar of the Kendall Refining Co., Bradford, were among those active in this discussion.

IT WAS suggested that it would be exceedingly desirable if the executives of the various plants would meet with the fire marshals and the proposal was advanced that the annual meeting of the marshals be held in the spring during the regular meeting of the National Petroleum Association at Cambridge Springs.

Harry R. Lewis, manager of the Conewango Refining Co. plant was one of the executives present at the meeting today. He stated that he regarded the meetings of the fire marshals as exceedingly important and that he always learned a great deal there.

J. J. Forbes, U. S. Bureau of Mines, talked to the association on fire aid work. He stated that what is done for an injured man in the first three or four minutes after the accident often determines whether the man will live. He stated the Bureau would help the fire marshals give first aid training to the men in their refineries.

Light was thrown on the accident prevention side of the association's program by H. N. Blakeslee, field representative of the petroleum section of the National Safety Council, who spoke on "What the Fire Marshals Can Do in Accident Prevention."

Receiver Sought for Imperial

TULSA, Jan. 16.—C. L. Mayhall, former vice president of the Imperial Refining Co. and a minority stockholder in the corporation, has filed suit in the district court of Tulsa county asking a receivership for the Imperial and allied companies, the Kettle Creek Refining Co., the Chelsea Refining Co. and the Imperial Oil Marketing Co. The petitioner alleges that capital expenditures were charged on the books as operating expense and charges mismanagement.

K. C. Abolishes Curb Pumps

KANSAS CITY, Jan. 16.—Kansas City has ruled curb pumps off the street. The last day they might operate legally was Jan. 4.

Commercial Chemicals from Natural Gasoline?

Paul Ryan

THREE exclusive articles in National Petroleum News—starting Jan. 25th—on new products which scientists believe may profitably be secured from natural gas and natural gasoline, and the widening of present markets, eventually resulting in economically sound stabilization of the natural gasoline industry.

The author, Paul Ryan, Tulsa, who served in technical departments of natural gasoline companies for several years, spent weeks in the east in a study of the chemical industry as a future paying customer of the oil industry—the natural gasoline portion of it at least.

Heads of some oil companies asked him, for the benefit of their own research departments, for the information resulting from this study. However, by arrangement with Mr. Ryan, National Petroleum News is offering it through its own news columns to all connected with the natural gasoline industry, in these three articles.

These articles suggest definite markets which may be developed for natural gasoline and by-products now produced only upon a laboratory scale. They compare prices now paid by various industries for such chemical products with prices at which the petroleum industry might deliver "replacement" products to such industries; and deal with possible profits to be realized by the oil business from serving such new markets.

Natural Gasoline Men to Meet May 22, 23 and 24

Staff Special

TULSA, Jan. 16.—The Natural Gasoline Association of America will hold its annual convention at the Mayo Hotel, Tulsa, May 22, 23 and 24 according to plans of the board of directors.

Three business sessions will be held on the opening day, a night session being decided upon to allow the program to be completed in time for a plant inspection trip. On the second day of the convention there will be a morning and afternoon session with the annual banquet being held in the evening.

For the third day the association plans to take all interested delegates on a tour of inspection of gasoline plants in the Seminole district. Reports received by Secretary A. V. Bourque indicate that a large group of California gasoline company executives will attend the convention. The program committee felt that a trip to Seminole, where a production of 800,000 gallons per day of natural gasoline was developed in almost a single year, would be of great interest to the California delegation as well as to many Mid-Continent and eastern manufacturers.

S. C. Carney of the Roxana Petroleum Corp., is chairman of the program committee for the convention. Other members of the committee are E. L. Peck, manager of the gasoline department of the Empire Oil & Refining Co., and Emby Kaye, general superintendent of the gasoline department of the Skelly Oil Co.

OIL CITY, Pa., Jan. 13.—Pure Oil Co. is closing its Oil City and Butler crude buying offices following a cooperative agreement with the National Transit Co. which has taken over the Pure Oil pipe lines in this region.

SAN FRANCISCO, Jan. 13.—G. B. Shea, associate petroleum engineer of the U. S. Bureau of Mines, headquartered at San Francisco, returned after an extended trip through the Mid-Continent and Texas fields in connection with the bureau's safety division.

H. C. Miller, petroleum engineer of the U. S. Bureau of Mines at San Francisco, has returned from a trip through the Eastern and Mid-Continent fields.

Index to Coming Meetings

Michigan Independent Oil Men's Association, Statler Hotel, Detroit, Feb. 2, 3.

North Dakota Petroleum Association, Waldorf Hotel, Fargo, Feb. 2, 3.

Iowa Independent Oil Men's Association, Savory Hotel, Des Moines, Feb. 8, 9.

Illinois Petroleum Marketers Association, Hotel Abraham Lincoln, Springfield, Ill., Feb. 15, 16.

Ohio Petroleum Marketers Association, Neil House, Columbus, O., Feb. 22, 23, 24.

American Oil Men's Association, Hotel Stevens, Chicago, March 6, 7 and 8.

Independent Oil Men of America, annual election, Stevens Hotel, Chicago, March 19, 20, 21.

American Association of Petroleum Geologists, business and technical sessions in San Francisco, March 21, 22, 23; field trips and entertainments, Los Angeles, March 24, 25.

American Oil Burner Association, Hotel Stevens, Chicago, April 3, 4, 5, 1928.

National Petroleum Association, Cambridge Springs, Pa., April 19, 20.

Volume of Oil in Sand After Flooding Questioned by Geologist

HOW much recoverable oil is there in the Bradford sand after the water drive has passed through?

Various estimates have been made —some quite high and indicative of large recoveries yet to come when some method has been devised to get out the residue. Paul D. Torrey, geologist for the Northwestern Pennsylvania Oil Producers Association, throws an element of doubt into such calculations in a paper prepared for presentation to the annual meeting of the American Institute of Mining and Metallurgical Engineers at New York in February.

"Ordinarily the cuttings of sand from wells drilled into unflooded sand will give a heavy scum of oil when washed with hot water," says Mr. Torrey. "Various operators have reported that, where a well has been drilled into the sand behind the flood, no oil can be washed from the cuttings. This has been corroborated by the author, who has inspected the sand from wells drilled in watered-out areas, which gave no indication of any oil remaining in the sand. Such wells, when pumped, yield large volumes of water and practically no oil.

"This condition is apparently contradictory to our previous conceptions of the oil content of the reservoir rocks. If 60 per cent of the oil is left in the sand after flooding, it would seem that, in drilling 30 feet of sand with a 6.25-inch hole, some evidence would be found of the remaining oil. However, assuming a porosity of 15 per cent, and 50 per cent oil saturation, there would be only about 4.50 gallons of oil in the volume of sand drilled, or 0.15 gallon per foot of sand. This, of course, is a relatively small amount, and may be so attached to the sand grains that it would hardly be recognized except by careful laboratory tests. It is somewhat doubtful whether it could be reclaimed even by very long continued pumping."

Continuing the same line of thought, Mr. Torrey discusses the possibilities of rejuvenating watered-out areas. It should be noted that, as yet, nothing has been accomplished along this line; few attempts have been made. Mr. Torrey says, on the possibilities of re-flooding with compressed air or gas.

"The recovery of the large amount of oil believed to remain in the sand after flooding is a problem of great interest and importance. Small accumulations of oil that may occur in irregularities in the top of the sand might be displaced by the use of compressed air or gas. Gravitational separation has probably been responsible for their origin; and, if air is introduced into the sand, it might be expected to act according to the same law, occupying the upper part of the sand and pushing away oil and water that have collected there."

Flooding under pressure has had its most marked success in the southwest New York fields. On one tract in the Richburg pool, Mr. Torrey says, the average daily production of oil from 10 wells has been increased from 3 barrels to 27 barrels by the use of force pumps, increasing the hydrostatic pressure on the sand by 200 pounds.

"The results from the use of extra pressure may be attributed to several causes," Mr. Torrey says. "Under a fixed pressure head, the sand will take a more or less constant volume of water. Should the sand possess considerable vertical variations in permeability, the capacity of the more permeable parts to take water might be sufficient to prevent much flooding through the less permeable parts. Since changes in the capacity to take water is not a constant function of variations in the pressure head, an increase in water pressure may be sufficient to cause water movements through the less permeable and possibly unaffected parts of the sand, while still supplying a volume of water adequate to meet the capacity of the more permeable parts under the same condition of increased pressure. As the pressure is increased, the effective area of flooding action expands horizontally, consequently accumulations of oil in certain parts of the sand area between the water intake and producing wells, which may originally have been unaffected by the flood, are displaced."

ABOUT two years ago much publicity was given to the experiments made in the use of soda ash in connection with water flooding at Bradford. That this is still in the experimental stage is set forth by Mr. Torrey:

"The use of sodium carbonate in the flood waters for increasing oil recovery is being tried on several properties in the Bradford field. Results from its use have been slow in appearing. Like any new process, it may require considerable time to determine the best field methods for its application and the conditions that will be most favorable for its action. A slow penetration of the sand by the soda solution is certainly desirable. At the present time it is one of the most important experiments in oil-recovery work that is being carried on in the Bradford field, and should it prove to be successful, it would undoubtedly be possible to reflood much of the present watered-out territory with a soda solution."

Mr. Torrey holds to be erroneous the "more or less widespread opinion that water flooding can only be successfully practiced in the Bradford and Allegany fields." He says that the method is being used with excellent results in several other Appalachian fields, but that the details have not been published because of legal barriers to such practice.

"Where an adequate supply of water is available, the deciding factor in the results that may be obtained from water flooding appears to be in the lithologic character of the reservoir rock. Sands of high porosity but relatively low permeability, due to a small size of pore space, appear to be best adapted to water flooding. For this reason, a fine-grained sand with correspondingly minute pore spaces would probably be more favorable than a coarse-grained sand, which, although possibly possessing a much higher permeability, may be of much lower porosity than the fine-grained sand."

MR. TORREY discusses in his article several patterns of flooding, and asserts that the line flood, developed by the Forest Oil Corp., consisting of producing wells staggered on both sides of an equally spaced line of water wells, has, with various modifications been generally adopted and "remains as the greatest contribution to the technology of oil-field flooding."

Among the striking points developed by Mr. Torrey in his paper are the following:

Some operators, fearing that a considerable quantity of oil will be lost by flooding toward the property lines of their neighbors, have drilled a flood line along the lease boundary rather than across the center.

When it is feared that considerable oil will be lost by flooding away from the center of the property, it is customary to pump alternate wells along the original boundary flood line, if a cooperative agreement cannot be arranged between adjoining property owners.

Some operators are shutting off small circle floods to prevent further complication of their main flood outlines and future flood contacts.

Mr. Torrey believes that one or more line floods, drilled across the lease and advancing toward the

boundary, is the most efficient method of production by flooding for a company that has acquired property since the increase in land value which followed the wider use of the flooding method. Quick return of the large initial investment and cost of drilling water wells will yield a greater ultimate profit. He believes, however, that, when a property is not burdened by royalty and was held in fee prior to the recent increases in value, a boundary flood is more profitable because of greater ultimate oil recovery.

Variations in porosity have caused much trouble. In the northern part of the Bradford field and in certain parts of the Allegany fields, the upper part of the sand was a prolific gas pay in the early life of the field. Gas was soon depleted, leaving an open reservoir with nothing to resist the movement of the water drive. Water naturally followed the path of least resistance and the oil pay remained relatively unaffected by the drive. Various methods have been tried to compel the water flood to exert its force where needed. In several instances it has been packed off from the upper depleted pay. One New York operator is reported to have cemented the upper unsaturated part by forcing a very thin cement into the sand by hydraulic pressure before the lower part was drilled. Other experiments have been tried.

Recently it was discovered by H. M. Ryder, of the Petroleum Reclamation Co., that the amount of water a well would take was partly dependent upon the height of the column of fluid in the hole. It has been noted that producing wells on the tops of hills show much greater irregularities in production of both oil and water than wells located in the valleys. This corresponds in a general way to the amount of rainfall. A comparison of the rate of water movement on adjoining properties indicates that, where the water wells are located topographically higher than the producing wells, there will be a much more rapid flood movement than if the water-intake wells are located on low parts of the property and the producing wells along the hillsides.

Directors Announce Vacancies Filled

LOS ANGELES, Jan. 14.—At a recent meeting of the directors of the California Natural Gasoline Association, the following vacancies were filled:

H. L. Eggleston of the Pan American Oil Co. was made a vice-president succeeding I. B. Funk, resigned. H. R. Sinhoff of the Richfield Oil Co. was made a member of the executive committee. John N. Hicks of the Superior Oil Co. was added to the executive committee. E. L. Tobias of the Bankline Oil Co. and W. B. Smith of the Wilshire Oil Co., were made directors.

N.Y. Standard Charges Price War Is Dutch-Shell Retaliation

CLEVELAND, Jan. 17

STANDARD Oil Co. of New York in a lengthy statement released to the press Monday, charged the Royal Dutch-Shell combine with price cutting, secret rebates and other unfair trade practices in India where the Royal Dutch-Shell and Standard of New York are marketing. The price warfare, as the Standard brands the activities of its competitor, is in retaliation because the Standard contracted to buy products from Russia after the Royal Dutch-Shell had failed in 1926 to get a monopoly on the sale of Russian petroleum products, the Standard charged.

The Standard's statement is a sequel to the flare that came last summer with the announcement that Standard of New York and Vacuum Oil Co. had contracted to obtain Russian oil and in return had agreed to get Russia certain foreign credits. At the time it seemed the Standard Oil Co. of New Jersey would become engaged in the dispute which brought forth several statements from the Vacuum and the Royal Dutch-Shell. The Standard of New York remained silent at the time and so far as the public was aware everything became quiet soon after a meeting of Walter C. Teagle, president of the New Jersey company, and Sir Henri W. A. Deterding, chairman of the Royal Dutch Co., conferred in Paris.

Such was not the case, however. The New York company charges in its statement that on Sept. 19 it was notified by the New York representative of the Asiatic Petroleum Co., a Royal Dutch subsidiary which through a Royal Dutch-Shell-Burmah combine supplies about 70 per cent of the oil used in India, that prices would be reduced on "superior oil" as soon as any more Russian oil arrived in India. Sept. 23 the price was reduced, the Standard alleges, and further reduced the next day. Prices of "inferior oil" were lowered a few days later and on Nov. 4 secret rebates were resorted to, the Standard stated.

The Standard maintained its contract with Russia was good business, that it was necessary in order that it might compete in southeastern European countries and Asia Minor and that it has been able to save at least 5,000 miles in shipping. Its competitor has sources of supply in Rumania and India. It alleges it has never undersold deliberately or ordered secret or other rebates to undermine the position of its competitor in India.

The Standard says its contract is in accord with the foreign policies of the American and even the British governments. In its statement it cited an announcement of the U. S. Department of June 7, 1920, that restrictions on trade with Soviet Russia were removed as of that date except on materials which might be used immediately for war purposes.

There also was cited a statement by the British home office of Aug. 26, 1927, that trade between Russia and Great Britain was not to be interfered with because of the expulsion of two directors of the Russian Oil Products Co., Ltd., because of their political activities in England and that it was not the intention of the British government to restrict Soviet trade organizations so long as they were not otherwise harmful.

The New York company's statement also contained statistics showing that more than twice as much kerosene was imported into the United Kingdom from Russia in 1927 than in 1925 and also more gasoline and lubricating oils.

The New York company charged that in 1923, 1924 and 1925, the Asiatic Petroleum Co. imported into Ceylon and India from Russia more than 23,880,000 imperial gallons of kerosene and that to the end of 1927 the New York company had imported approximately 21,000,000 gallons.

The Standard estimated the price war would cause a loss of approximately $12,750,000 a year to the Royal Dutch-Shell-Burmah combine and to itself of approximately $4,000,000 a year. The statement concludes:

"Standard Oil Co. of New York will continue to supply its markets effectively; it will carry out all contracts into which it has entered, and it will not be swerved in any manner from its clearly conceived policy by such desperate and destructive measures as are being followed in India, and threatened in other parts of the world."

Three weeks ago Liberty magazine published an article entitled "The Soviet Oil Industry", by Sir Henri W. A. Deterding. In it Sir Henri decried the depths to which the Russian oil industry had sunk after seizure of the oil properties from private owners. The Vacuum Oil Co. was one of the largest losers when the state confiscated producing, refining and marketing properties after the red revolution. It was indicated last summer after Vacuum had contracted to distribute Russian oil in parts of Europe that the company hoped yet to get some sort of adjustment from the Soviet.

Two Pools Get Most of Southern Oklahoma Development in 1927

TULSA, Jan. 14

WHILE the eyes of the oil world have been turned toward Seminole during the last year and a half, the southern part of Oklahoma has been going quietly about its business, gradually increasing its production without any great fuss or feathers.

The two pools in which most of the drilling activity centers, are the Sholom Alechem and the Knox fields. The Sholom Alechem field takes its name from the Sholom Alechem brotherhood of oil men. Sholom Alechem is the greeting as well as the name of the organization, and means, "Peace be with you." And peace seems to be the keynote in the development of the district.

The Sholom Alechem in Carter county field was discovered Feb. 11, 1924, when a well good for 100 barrels a day was completed in the SW SW SE of 28-1S-3W. Since that date sporadic drilling campaigns have increased the number of wells to about 215, with a daily gross production of nearly 13,000 barrels of oil ranging in gravity fram 28 to 36 degrees.

The pool covers an area extending through the townships of 1s-4w and 1s-3w, having a maximum width at present of about two miles, with the trend of production being Northwest-Southeast. The drilling is not difficult, rotary tools being used almost exclusively, for both drilling and completing the wells. The principal development at present being in Secs. 12 and 13, 1s-4w, along the northwest edge of the field, although the productive area around Secs. 2 and 11, 2s-3w has not as yet been fully defined.

Geology in the field is not at all regular. Sub-surface dips of 45 degrees between locations are frequently encountered. Nor does the fact that a well is apparently favorably located structurally mean much. For example, on the Wirt Franklin Jordan lease, which covers parts of Secs. 18 and 19, 1s-3w, well No. 8 came in for 3,000 barrels. No. 6, the south-west offset to it, came in for 1300 barrels. No. 10, a direct west offset to the big well, came in for 300 barrels. A well two locations west of No. 8 came in for 50 barrels, although it was farther up the dip than any of the others.

None of the wells had any appreciable difference in the volume of gas encountered. There are several producing sands, one at 3100 feet, one at 3150 feet, and one at 3325 feet, the amount of break between sand bodies varying greatly from well to well.

It is a difficult matter to predict the future of the field. The production curve seems to indicate that the wells will be fairly long lived, with a recovery per acre which has been estimated between 5,000 and 6,000 barrels. Drilling activity is revived periodically by extensions in the general trend of the present production, the most important well drilling at present being the Wirt Franklin No. 1 Crews, in the SE NE SE of 12-1s-4w. At last reports this well was drilling at 2,601 feet having passed out of the lime at 2,530 feet, which local geologists consider high enough for production. There are about 10 wells drilling in the field, some of which may help to prove additional productive territory.

The Knox field which lies principally in Grady county, had its beginning in August, 1922, when Clyde Becker, Earl Frates and Walter Gant completed a small well at 1800 feet in the SW corner of 31-4n-5w. A little later the Knox Petroleum Co. brought in an 11,000,000-foot gas well at 1200 feet in 27-2n-5w. Since then, a strip about a mile wide between the two wells has been found to be productive from sands at 1200 feet, 1400 feet, 1700 feet, 1900 feet, 2300 feet, 2600 feet and 2800 feet, with wells ranging from 20 to 1000 barrels, and with the oil varying in gravity from 27 to 44 degrees.

At present there are about 75 producing wells in this pool, having a total production of around 6,000 barrels daily. The sands are soft, and it is thought that it will never be necessary to shoot the wells when completing them.

Due to the lenticular nature of the sands found, no attempt has been made to name them. Drilling is carried on with rotary tools to the top of the sand, where 8-inch casing is set, and the wells completed with cable tools. It has been estimated by some of the operators in the field that the recovery per acre will be not less than 10,000 barrels.

Description of Views On Opposite Page

RALPH L. HALLORAN, a technologist of the Standard Oil Co. of California, at the recent meeting of the American Petroleum Institute in Chicago, described a system of which he is the inventor for treating pressure distillate with sulfuric acid at very low temperatures.

On the opposite page are pictures of elements of the Standard of California's plant built to carry out Mr. Halloran's process.

Fig. 1.—View of compressor room showing direct connected 450 horsepower synchronous motors. These compressors are two-stage, compressing to 50 pounds low stage and 135 pounds high stage. Cylinder dimensions are: Low pressure, 20.5 inches diameter by 21-inch stroke. Capacity rated at 350 tons refrigeration.

Fig. 2.—View showing treating plant, pre-coolers and reaction coolers, sludge settler and separator and washing and neutralizing drums. Distillate enters nearest pre-cooler No. 1 on top tier, thence to No. 2 and No. 3. Ammonia pressures in these pre-coolers are: No. 1—50 pounds, temperature 30 degrees Fahr. No. 2 and No. 3—22 pounds, temperature 8 degrees Fahr. Distillate is then mixed with sludge and enters coolers No. 4 and No. 5 (back of top tier). Ammonia pressure is 10 pounds, temperature 0 degrees Fahr.

Cooled, dried naphtha then to booster pump where portion of acid is added and mixture is cooled in No. 6, No. 7 and No. 8 reaction coolers. Then to No. 2 booster pump where additional acid is added and to No. 9 and No. 10 reaction coolers. Reaction coolers No. 6, No. 7, No. 8, No. 9 and No. 10 run at 22 pounds ammonia pressure, 8 degrees Fahr.

Mixture of naphtha and sludge thence to No. 4 treater (7 by 30 feet upright drum frosted) where bulk of sludge is settled. Sludge for drying raw naphtha is drawn from this settler. Naphtha from No. 4 treater to horizontal settler (frosted) for removal of traces of sludge. Booster pumps are turbine driven 4 by 5, rated at 500 gallons per minute against 180-foot head. Speed 2250 revolutions per minute.

Fig. 3.—View showing condensers and receivers. One intercooler behind the first condenser on the left. Condensers are water film tube cooled, size 45 inches by 15 feet containing 233 tubes 2-inch diameter. Receivers are horizontal drums 5 feet in diameter by 20 feet long. High stage ammonia vapor line shown coming out of front wall of building about 5 feet off ground, running left to coolers.

Fig. 4.—Flow sheet of continuous treating system for pressure naphtha at low temperatures.

Halloran's Cold Acid Treating Method in Pictures

(See N. P. N. Dec. 14, 1927—Page 29)

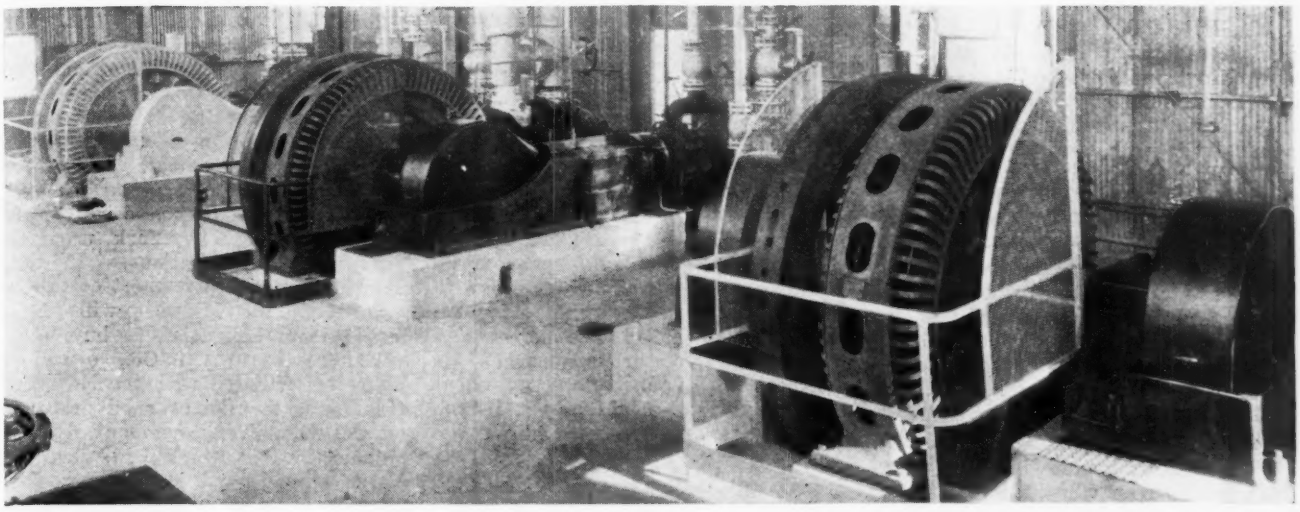


Fig. 1

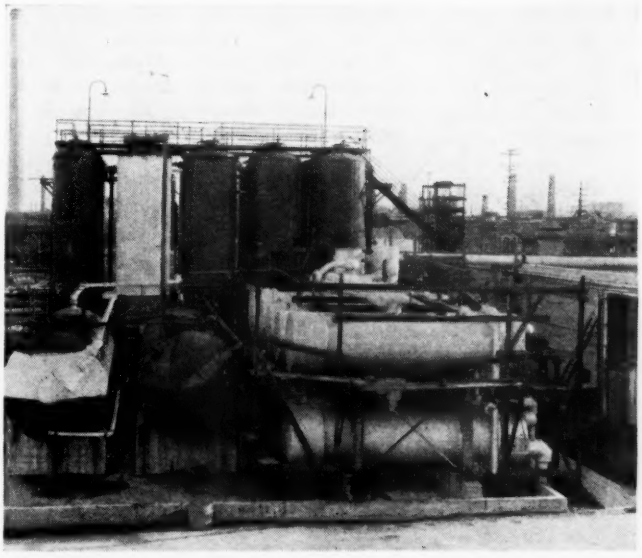


Fig. 2

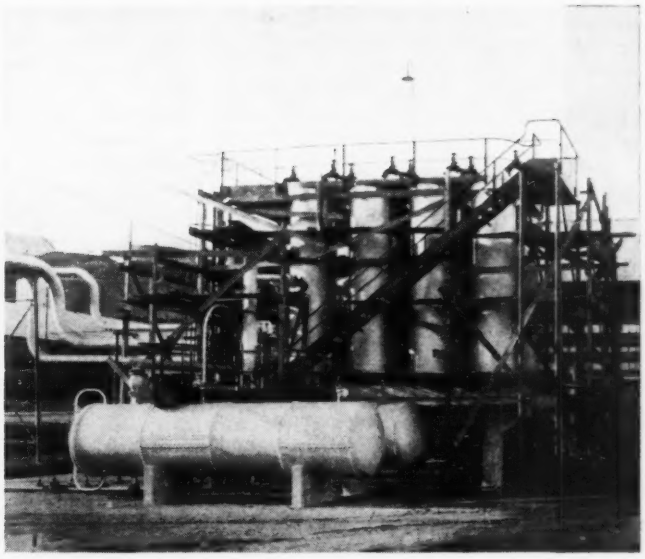


Fig. 3

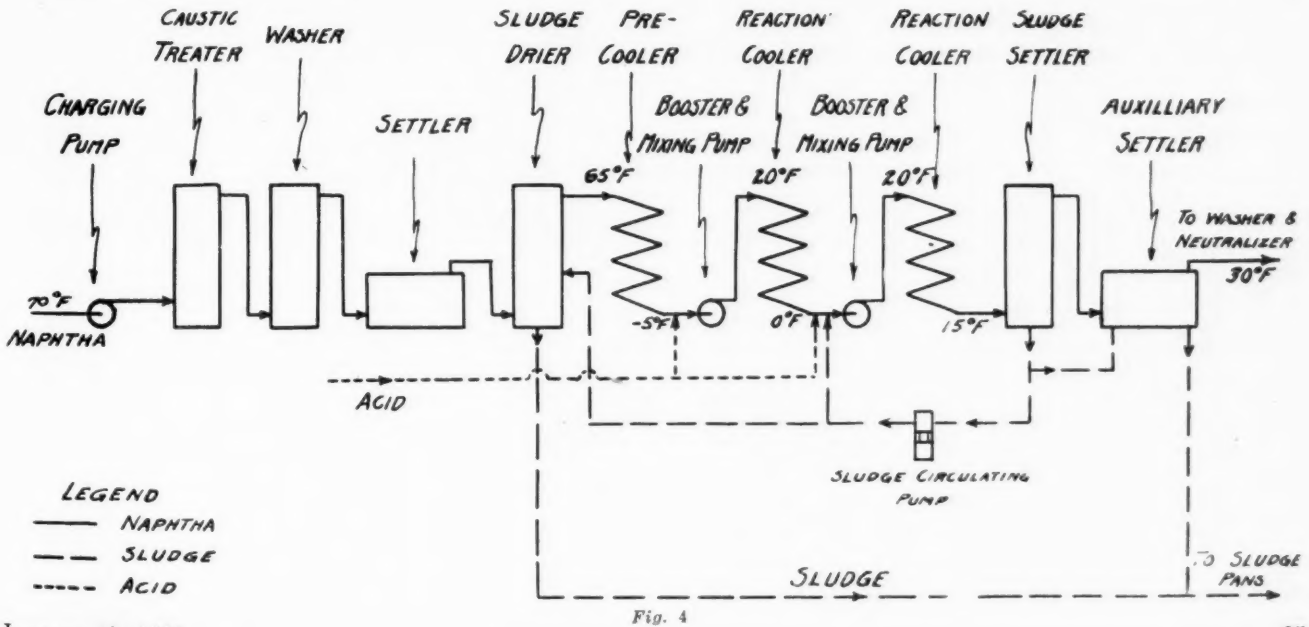


Fig. 4

Senate May Bring New Men Into Probe

WASHINGTON, Jan. 16.—Unless plans tentatively formed by the men controlling a majority of the votes in the United States Senate go awry, that body, through its committee on public lands will ask John D. Rockefeller, Jr. George E. Vincent, president of the Rockefeller Foundation, and Col. Robert W. Stewart, chairman of the board of the Standard Oil Co. of Indiana to tell what they know about the deal whereby the Continental Trading Co. bought the A. E. Humphreys crude at $1.50 a barrel and sold it to the Sinclair Crude Oil Purchasing Co. and the Prairie Oil & Gas Co. at $1.75 a barrel.

The senators would like to know whether the men who made that deal were acting for the Standard (Indiana), controlled by the stock of Mr. Rockefeller, the Rockefeller Foundation and employees of the Standard, or for themselves in the taking of a profit which was invested in Liberty bonds, totalling $3,000,000, of which $230,000 were traced to Fall's son-in-law.

In the opinion of senate leaders, the government, having been unable to obtain the testimony of James O'Neill, Henry M. Blackmer, H. S. Osler or Robert W. Stewart, should inquire as to whether the men who managed the Continental Trading Co. part of the Teapot Dome affair, defrauded the Standard.

Senator Norris, Nebraska, one of the men who controls the senate by means of coalition of Democrats and insurgent Republicans, brought the attention of the senate to that phase of the subject because he had received a letter from A. W. Green, 74 Board of Trade, Chicago. Green asked why should not John D. Rockefeller, Jr., and George E. Vincent be subpoenaed by the government or the senate to be questioned about the disposition of the $8,000,000 transaction in the "Continental oil deal and the scandalous activities of Stewart and other subordinate officials in the Standard Oil Co. of Indiana, the control of which appears to be vested in the Rockefeller Foundation, the Rockefeller Educational Bureau (General Education Board), and the employees of the Standard Oil Co. of Indiana?"

Colonel Stewart was in South America when his testimony was desired at the Cheyenne trial. He came back and said that he did not know that a subpoena was out for him. He has been in the country ever since then available for summoning but has not been called.

Inquiry of the sort indicated will open a new line in the whole matter about which there has been much private but no public speculation or questioning.

The Norris suggestion is that the public land committee should find out what became of the profits achieved by the deal of the Continental Trading Co.; why officials of three Standard Companies should set up a Canadiana corporation to take over the Humphreys oil and sell it at a profit to the Standard and Sinclair companies to which the men who set up the trading company owed obligations of a quasi-fiduciary character; finally winding up the matter by selling the contract of sale between the Canadian company and Humphreys to the companies the officials of which had organized the trading company and guaranteed the performance of its contract to take the Humphreys oil at the agreed price of $1.50 per barrel.

RIVERHEAD, N. Y., Jan. 17.—The Peconic Oil Co. has recently been organized here to distribute Pan Am products, and alcohol, greases and motor oils.

Three stations will be built in Suffolk county, the first of which will be the main plant in Riverhead, Long Island. James Hendry, who was formerly with the Agni Motor Fuel Co., of Chicago, is vice president and manager.

New York Oil to Sell Salt Creek Holdings

CLEVELAND, Jan. 16.—New York Oil Co. has contracted to sell to the Midwest Refining Co., subsidiary of the Standard Oil Co. of Indiana, its royalty and working interests in the Salt Creek field in Denver, according to advices from Denver. Transfer of the interests is to be in three months and is conditional upon certain showings made by New York properties during the negotiations. If these showings later fail to meet certain requirements the Midwest will be released from obligation to buy.

Empire State Oil Co., owned by interests affiliated with the New York Oil Co., is to take over oil properties of the New York company that lie outside the Salt Creek field. The New York company will continue to function as a public utility. It supplies Casper, Wyo., and surrounding territory with natural gas. The New York company was interested in 4,560 acres and 633 wells.

NEWBURYPORT, Mass.—Another oil man has just been elected to assume the leadership of his town. Andrew J. Gillis, owner of the Gillis Oil Co. here, has been elected mayor.

3 Ohio Oil Men Bag Deer

THE primitive exists in Canada. Witness three Ohio oil men and their bag in northern Ontario. C. A. Pierce is on the left, and S. E. McFarren on the right, both of the C. A. Pierce Oil Co., Akron; Ralph Seager, Cleveland, district representative of the Quaker State Oil Refining Co., Oil City, is in the center. The hunters brought back three bucks, two eight-pointers and one nine-pointer, each of which dressed more than 200 pounds. Mr. Pierce also got a cub which he is raising at his Akron home.

* * *

More than 50 employes and dealers of the C. A. Pierce Oil Co., Akron, were entertained at dinner by the company, Dec. 22, at the Cleveland-Akron club. Venison, brought back from Canada by Mr. Pierce and S. E. McFarren, his general manager, where they hunted recently, was served. Mr. Burns of the Burns-Quirk Co., Akron, automobile agent, talked about his three-months' tour of Europe.

Oil Board Surveys Shale, Coal, Alcohol, Lignite as Petroleum Substitutes

WASHINGTON, Jan. 16

OIL shale supplying 92,000,000,000 barrels of oil.

Coal supplying 92,000,000,000 barrels of motor fuel.

Lignite, estimated yield 12,000,000,000 barrels of motor fuel.

Alcohol, from corn, or molasses which is a by-product of cane sugar, supplying a small percentage of probable needs.

These are the possible petroleum substitutes about which the Federal Oil Conservation Board made its second report to President Coolidge Jan. 16. The first report, submitted Sept. 6, 1926, covered general petroleum conditions in the United States, and the third report which may be submitted this year will survey world-wide oil resources.

"Following the completion of its third report, this board will, if in the meantime practical conservation measures have not been adopted by both government and industry, make certain specific recommendations to the President of the United States, designed further to safeguard the country's natural petroleum resources," so Hubert Work, secretary of the Interior, and chairman of the Federal Oil Conservation Board, wrote in the foreword to the second report.

This second report sums up the possibilities of shale, coal and alcohol as possible petroleum substitutes, and in the appendix is published reports from government departments covering these subjects in greater detail. The report is closed with a chapter on possibilities of more efficient use of motor fuel, and the progress of oil conservation which tells how the oil industry is co-operating with the Federal Oil Conservation Board and how the trade press is giving sympathetic support that help to justify the faith "that government and business can well join forces to work out this problem of practical conservation."

Following are the data given in this second report on the three suggested possibilities for petroleum:

Oil Shale

Estimates as to the extent of oil shale from which petroleum substitutes can be recovered are based on those made by Dean Winchester, Denver, who estimated 92,000,000,000 barrels of oil.

Appendix I of the report is Mr. Winchester's report, which divides shale into three classes, Tertiary of the Rocky mountain region, Devonian black shales of eastern states, and cannel shales of eastern states. From Tertiary oil shales he estimates there are 125,476,037,000 barrels of oil, of which 75,335,721,000 barrels are recoverable. This estimate is for Colorado, Nevada, Utah and Wyoming. Colorado has 47,625,598,000 barrels, Utah, 25,680,000,000 barrels, Wyoming 1,826,400,000 barrels and Nevada 3,623,400 barrels of recoverable oil. No shale less than one foot thick, yielding less than 15 gallons of oil to the ton on 3,000 barrels of oil to the acre should be mined, Mr. Winchester said in outlining shale oil limitations.

Devonian black shales will yield 16,792,704,000 barrels of recoverable oil, Mr. Winchester estimated; 9,880,704,000 barrels from Kentucky and 6,912,000,000 barrels from Indiana. Factors necessary in considering the use of this shale are that it shall not be less than a foot thick, should yield not less than 10 gallons of oil to the ton, should yield not less than 2,000 barrels of oil to the acre mined, and should be removed by open-cut or steam shovel mining methods. No estimate was made of the extent of this shale in Ohio and Tennessee.

Recoverable oil from cannel shales of the coal measures amounts to 16,560,000 barrels, Pennsylvania and West Virginia yielding 8,280,000 barrels each.

In all Mr. Winchester's estimate places the total of oil which might be manufactured from oil shale at 92,144,935,000 barrels, or 10 times the amount of oil produced in this country from the beginning of the industry to the end of 1924.

Appendix II, a report from the Bureau of Mines, concludes that oil shales afford a possible substitute which the price of petroleum becomes sufficiently high to make manufacturing of substitutes possible. This use of oil shale will be gradual, supplanting petroleum as crude production declines, and it will be difficult to interest capital in oil shale until the petroleum wanes.

As to the costs of manufacturing oil from shale it is pointed out in this appendix that some persons believe shale can compete with petroleum on the present price bases and others believe that crude oil prices will have to be from two to five times as high before shale oil can be marketed. Estimates of the cost of mining range from 40 cents to $2.50 a ton. Shale oil has been manufactured in Scotland for 75 years, but this business was demoralized shortly after the World war when low priced petroleum arrived. In this country there were more than 100 shale oil companies at one time, many of which were stock promotion schemes. The United States government established an experimental plant in western Colorado which was operated from September, 1926, until the appropriation was used up in June 30, 1927.

The technical problems involved in oil shale production, it is pointed out in the appendix are those of what mining methods to use, what retort is best fitted for the work, and selection of the shale.

ECONOMICALLY, shale oil brings up the problem of having the deposits far from oil markets, and far from water supply needed in retorts, and the problem of disposing of the waste shale. It is stated that it has been suggested that the waste shale be used in manufacturing brick and clay products, but this would bring the waste in competition with cheap bricks made from raw material obtained near the ultimate market.

The shale oil industry would yield a small profit per unit which would require a large capital outlay while oil may yield a rich return on a small investment. There would be no dry

No Formal Program for Committee Hearing

WASHINGTON, Jan. 17.—Any person, inside or outside the oil industry, who has views concerning the regulation of oil production in the interests of conservation he desires to put before the authorities, may appear before Secretary of the Interior Work's Committee of Nine, at its public meeting which will open at 10 a. m. Jan. 23 in a room adjoining the office of First Assistant Secretary of the Interior E. C. Finney, who is a member of the committee.

The Committee of Nine, consisting of three representatives of the oil industry, three of the minerals section of the American Bar Association, and three of the government, was organized last month at the suggestion of Secretary Work. It is to consider proposals for regulating production to the end of conservation, either by voluntary efforts of the industry or through the government.

The committee will hold a private meeting Jan. 21 to consider suggestions submitted in writing to the committee as a result of its invitation at the time it was organized. Secretary of the Oil Board Rochester said the amount of material submitted was small.

holes in the shale business, but on the other hand there would be no spectacular fortunes.

It is stated in the report that shale oil is entirely different from crude petroleum oil, "containing a much higher percentage of unsaturated hydrocarbons, a lower percentage of gasoline, a higher percentage of wax, and a relatively high percentage of nitrogen compounds that have a rather offensive odor." Shale oil in Scotland has a loss of approximately 22 per cent as against a loss of 3.50 per cent of American petroleum. "It is questionable whether shale oil will yield the same range of products that are now made from petroleum, particularly lubricating oils of high viscosity. On the other hand, it is possible that special products, such as high melting point waxes, can be made from shale oil much easier than from petroleum," it is reported.

Coal

All bituminous coal deposits within 3,000 feet of the earth's surface would yield about 92,000,000,000 barrels of motor fuel, the board reported, which is more than 300 times the motor fuel production in 1927. Lignite deposits, it is estimated, would yield 12,000,000,000 barrels of motor fuel.

Nearness to marketing centers is one advantage cited for coal over shale as a petroleum substitute. Another advantage is the residue from distilled coal is a valuable fuel as against the waste left from the shale. Shale has the upper hand in that, generally speaking, it can be more easily mined and the yield of oil from shale might be larger than from coal. "If coal could be liquified commercially, the yield of oil will be much higher than could be obtained from oil shale," the board commented.

Production of benzol in 1926 was less than 1 per cent of the gasoline production that year. This high temperature distillation of coal yields about three to four gallons of light oil to the ton.

The possibility of coal being a petroleum substitute has led to the setting aside of 4,000 acres of publicly owned coal deposits in Wyoming and Montana with an estimated extraction of 80,000,000 barrels of oil for the Navy. (Incidentally, 100 years ago the Navy created a live oak timber reserve in Louisiana for oaken walls for battleships and 75 years ago laid away a supply of live oak timber in underwater storage at Pensacola bay for battleship walls.)

In Appendix III of the report manufacture of petroleum from coal is discussed by A. C. Fieldner, chief chemist of the Bureau of Mines.

Alcohol

Corn and molasses afford the only commercially possible agricultural petroleum substitutes. The 1926 supply of by-product molasses from cane sugar manufacture would have yielded less than 2 per cent of that year's gasoline requirements and if the entire 1926 corn crop had been converted into industrial alcohol it would have supplied 44 per cent of the gasoline used. To have corn supply the gasoline substitute would take two-thirds of the present total tilled acreage of the country, the board estimated.

On the basis of average automobile consumption of 500 gallons of gasoline a year, it would take 18 acres of wheat, or 9.50 acres of corn, or 8.75 acres of potatoes to make the substitute motor fuel of alcohol to supply the need of one automobile. Three acres of sugar beets would supply the amount needed for one car, 500 gallons.

The use of a modern steam engine, or further development of the electric auto, or the use of a Diesel auto engine would change the picture of transportation, the board predicts in the concluding chapters.

Larger recovery of gasoline by cracking and the increased efficiency of automobile engines are factors in increasing the number of miles in a barrel of petroleum, the board commented. Leaders of the oil and automotive world realize the need for this more efficient engine and a better motor fuel and much research work has been done in company and government laboratories.

"The next step in motor improvement with the object of fuel economy, is installation of the high compression engine, but an essential preliminary to the general use of the improved motor is the wide distribution of special motor fuels adapted to high compression," the board wrote.

Service Station Census Sought by Board

WASHINGTON, Jan. 16

A SUGGESTION that a census be taken of filling stations through the country, which "would furnish an obvious argument against the continuation of the unnecessarily expensive duplication of distribution facilities," was made by the Federal Oil Conservation Board in its second report to the President.

It was suggested that the census be made by the American Petroleum Institute and the National Automobile Chamber of Commerce primarily to determine the extent to which high compression motor fuel is sold and also to obtain an enumeration of all service stations which would show the unnecessary duplication of marketing facilities.

"The replies to the board's earlier questionnaire were almost unanimous in regarding this duplication as an economic waste, yet the country over the increase in both urban and rural stations continues at a rate far beyond the increase in gasoline consumption," the board asserted.

Chronology

Dec. 19, 1924—President Coolidge issued letter suggesting organization of Federal Oil Conservation Board.

Jan. 7, 1925—Oil board organized, with Secretary of the Interior Work chairman.

Feb. 10 and 11, 1926—Public hearings on petroleum resources conducted by oil board at Washington.

Sept. 6, 1926—Board made first report to President Coolidge on petroleum supply in this country.

Dec. 10, 1927—Committee of Nine, suggested by Secretary Work, organized at Washington to consider possibility of regulatory legislation.

Oil Scouts Will Meet in Guthrie

TULSA, Jan. 14.—The third annual convention of the Mid-Continent Oil Scouts Association will be in Guthrie, Okla. April 27 and 28. The first day will be devoted to registration, with a banquet in the evening at which a few papers and short talks will be heard. The business session will be at 10 a.m. the second day, followed by a luncheon. A golf tournament in the afternoon will precede a banquet and a dance in the evening which will close the meeting.

The officers of the association are C. E. Savage, Carter Oil Co., president; C. E. Hewitt, Mid-Continent Oil Corp., first vice-president; R. T. Miller, Sinclair Oil & Gas Co., second vice-president; Simon Crites, Phillips Petroleum Co., secretary-treasurer. The board of directors, of which Rex L. Dawson of the Carter Oil Co., is chairman, is composed of the officers of the association and one member from each scouting district, and is as follows:

H. H. Thoeming, Gypsy Oil Co., Tulsa, C. R. Piggot, Pure Oil Co., Ponca City, C. A. Barlow, Carter Oil Co., Seminole, H. N. Guthrie, Indian Territory Illuminating Oil Co., Shawnee, G. W. Greenlee, Mid-Continent Petroleum Corp., Cushing; C. W. Michaels, Shaffer Oil and Refining Co., Okmulgee.

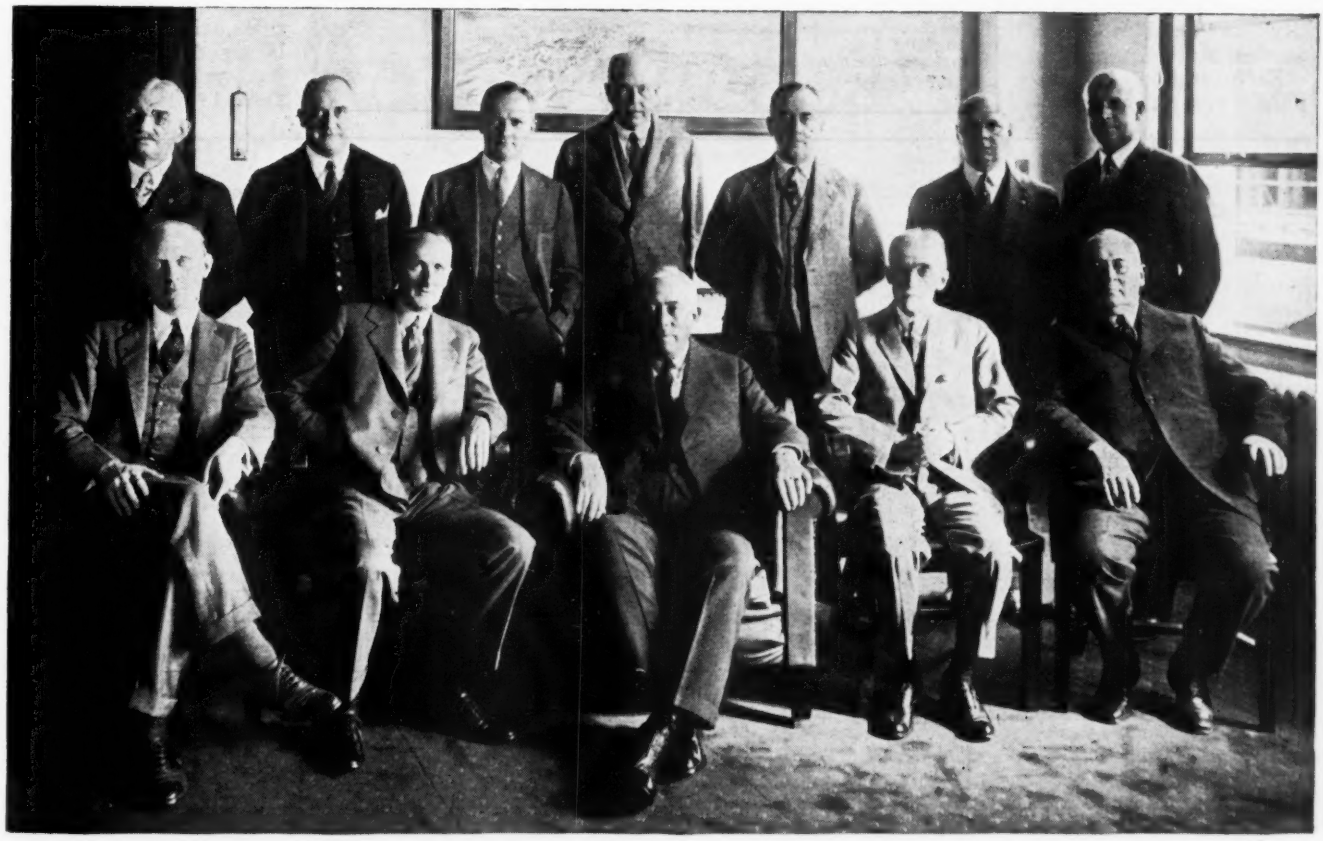
PROPERTIES OF 12 SAMPLES OF WEST TEXAS CRUDE

Following are tabulations from an analysis of west Texas crude made by the Bureau of Mines, reported in detail in Bulletin Serial No. 2849:

Sample No.	27866	27856	27858	27857	27860	27861	27862	27863	27864	27867	27859	27865
Field	Big Lake	Chalk	Chalk	Chalk	Church & Fields	McElroy	McElroy	McCamey	McCamey	World	Hendricks	Yates
Sand	Permian Lime	Chalk	Chalk	Porous Limestone	Permian Lime	Permian Lime	Permian Lime	Permian Lime	Permian Lime	Permian Lime	Permian Lime	Permian Lime
Depth, feet	2900–3100	1770–1800	1600–1630	2956–2990	2900–3200	2800–2900	2800–2900	1800–2300	1800–2300	2500–2700	2700–3100	1000–1500
Properties of Crude												
A. P. I. Gravity	38.2	32.1	31.3	26.8	31.1	33.0	32.8	24.5	25.6	29.7	30.0	30.0
Per Cent Sulfur	0.36	.84	.91	2.02	2.69	2.42	2.40	2.29	2.23	0.59	1.53	1.61
Viscosity 100° F.	41	60	63	66	50	51	47	110	104	80	56	59
Pour Test °F.	(a)	50	35	25	(a)	(a)	(a)	(a)	(a)	35	(a)	(a)
Light Gasoline Fraction %	9.9	6.3	6.7	5.4	6.9	7.4	7.3	1.6	2.7	2.5	4.4	4.3
A.P.I. Gravity	73.9	71.8	68.6	70.1	71.5	72.7	71.2	60.5	71.8	72.7	76.9	74.2
Total Gasoline Fraction %	32.8	25.0	23.7	21.2	26.8	27.0	26.6	14.5	15.8	18.8	22.7	22.2
A.P.I. Gravity	59.5	57.2	56.2	54.9	57.4	57.9	57.4	50.9	54.9	54.7	57.7	56.4
Kerosene Fraction %	9.8	9.5	10.0	4.5	9.8	9.5	9.6	5.0	4.0	4.0	5.6	5.0
A.P.I. Gravity	41.3	41.7	41.7	41.1	41.5	41.3	41.7	40.6	41.5	40.9	41.1	41.1
Gas Oil Fraction %	13.7	15.4	15.0	20.7	15.6	14.8	14.5	18.9	19.2	18.9	18.4	18.5
A.P.I. Gravity	35.2	34.6	34.6	33.2	33.8	33.6	33.8	33.4	33.4	35.0	32.7	33.6
Total lubricating distillate%	17.5	17.7	17.4	19.6	19.0	17.7	19.9	27.6	26.7	20.9	22.3	26.8
Nonviscous % (50-100 Sec. Vis.)	8.8	10.3	9.9	10.7	10.4	9.8	10.7	12.5	10.4	10.4	9.6	9.8
Sp. Gr.	.862–.884	.867–.893	.866–.891	.889–.917	.878–.903	.879–.902	.875–.902	.887–.913	.888–.912	.868–.890	.894–.918	.885–.912
A.P.I Gravity	32.7–28.6	31.7–27.0	31.9–27.3	27.7–22.8	29.7–25.2	29.5–25.4	30.2–25.4	28.0–23.5	27.9–23.7	31.5–27.5	26.8–22.6	28.4–23.7
Medium % (100-200 Sec. Vis.)	5.7	7.4	7.5	7.1	7.2	7.9	7.3	8.6	7.7	7.2	6.2	7.0
Sp. Gr.	.884–.897	.893–.895	.891–.894	.917–.932	.903–.912	.902–.911	.902–.917	.913–.924	.912–.925	.890–.904	.918–.927	.912–.922
A.P.I. Gravity	28.6–26.3	27.0–26.6	27.3–26.8	22.8–20.3	25.2–23.7	25.4–23.8	25.4–22.8	23.5–21.6	23.7–21.5	27.5–25.0	22.6–21.1	23.7–22.0
Viscous % (Above 200 Sec. Vis.)	3.0	....	....	1.8	.... 1.4	....	1.9	6.5	8.6	3.3	6.5	10.0
Sp. Gr	.897–.904	.....	.....	.932–.936	.912–.914	....	.917–.920	.924–.931	.925–.937	.904–.910	.927–.929	.922–.936
A.P.I. Gravity	26.3–25.0	.....	.....	20.3–19.7	23.7–23.3	.....	22.8–22.3	21.6–20.5	21.5–19.5	25.0–24.0	21.1–20.8	22.0–19.7
Residuum %	24.9	31.5	32.1	33.9	27.6	27.4	25.9	34.0	34.1	36.8	29.7	25.7
Distillation Loss %	1.3	.9	1.8	.1	1.2	3.6	3.5	.0	.2	.6	1.3	1.8
Viscosity at 100°F. of vacuum fractions												
225-250	66	60	61	63	62	61	65	70	76	69	76	73
250-275	105	89	91	97	100	93	100	125	135	110	135	125
275-300	200	155	145	180	180	175	180	230	270	200	270	270
Percentage carbon residue of residuum	4.6	12.0	12.5	13.9	12.0	11.3	11.2	11.7	12.3	5.8	8.5	11.6
Fraction distilling at atmospheric pressure between 250-275°C. (482-527°F.)												
Sp. Gr.	0.835	0.837	0.836	0.851	0.840	0.841	0.841	0.858	0.853	0.844	0.857	0.854
A.P.I. Gravity	38.0	37.6	37.8	34.8	37.0	36.8	36.8	33.4	34.4	36.2	33.6	34.2
Fraction distilling at 40 mm. vacuum between 275-300° C. (527-572° F.)												
Cloud Point °F.	90	90	90	95	90	85	90	50	55	80	(a)	(a)
Base of crude	A	A	A	A	A	A	A	A	A	A	B	B

A—Intermediate. B—Naphthene (a)—Below 5°F.

Some Officers and Directors of Standard (N. J.), Inc. in Delaware



A recent photograph of some of the officers and members of the board of directors of the Standard Oil Co. of New Jersey, incorporated in Delaware. This company is one of the three recently organized subsidiary companies of the Standard Oil Co. of New Jersey, incorporated in New Jersey. In the back row, from left to right, are W. C. Koehler, director; E. A. Holbein, director; F. W. Abrams, director; C. H. Haupt, director; J. A. Van Wynen, director; E. G. Barber, director; E. A. Rudigir, director. In the front row, left to right, are Richardson Pratt, vice president and director; C. G. Sheffield, vice president and director; C. G. Black, president and director; George W. McKnight, vice president and director; C. T. White, secretary. An article outlining the new operating policy of the Standard of New Jersey, was published in National Petroleum News, issue of Jan. 4

Daily Inventory on Auto Necessities Keeps Down Station Losses

By Roger B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, Jan. 16

AKRON OIL CO., Akron, O., seems to have overcome the chief bugbear of handling small automobile supplies at service stations —inventory losses. This company which operates 30 service stations in the rubber center has a loss of only a few cents a month at a station on this kind of merchandise and it has inspired its station salesmen to strive for perfect records against losses. The December loss was less than $1.

The Akron Oil Co. carries about 70 items of automobile necessities, including the various sizes of grease fittings, lamps, tires and tire patches. It has minimized losses by keeping a running inventory sheet which shows daily receipts, sales and quantity on hand at each service station.

Each station is supplied with five inventory sheets, each 13 inches wide and 16½ inches deep. These sheets are collected at the middle and end of each month by the man who devotes his whole time to the automobile necessity branch of the business. The station sheets are checked against records of deliveries and sales kept at the general office. Items are listed under alphabetically arranged general headings. Under each general heading several blank spaces are left for listing newly arrived goods. At the top the days of the month are listed.

Each station carries an inventory valued at $150 to $200 and sells about $100 worth of automobile supplies a month, making total supply sales for the company's chain around $3,000 a month. No effort is made to annoy gasoline and oil customers by pushing these supplies which were first stocked to accommodate motorists in emergencies.

Gross margins run from less than 20 to 40 per cent on this merchandise with the average around 30, oil men say. In years past it has been possible for the oil and gasoline jobber to make additional profit by buying automobile necessities in large quantities, thereby getting a larger discount from the list price and jobbing them to his oil and gaso-

FOLLOWING is a list of accessory items carried in stock at stations of the Akron Oil Co., Akron, Ohio. These items are printed on the five perpetual inventory sheets.

Alemite fittings—four styles and bushing.
Alemite-Zerk fittings—two styles.
Retouch black.
Flash light cells.
Emergency gasoline cans.
Caps for Ford breather, hub and gasoline tank.
Tire cement.
Ford Coil points.
Boxes of assorted cotter keys.
Ford fan belts.
Large and small fuses.
Ford hose connections and clamps.
Tail light lens.
Liquid radiator solder.
Mitten dusters.
Neatsfoot compound.
Oildag.
Penetrating oil.
Blowout patches—four sizes.
Tires—five sizes in common use.
Nickel and body polish.
Tire repair kits.
Inner tube vulcanizers and patches.
Gasket shellac.
Valve cores, caps and dust caps.
Spark plugs—four sizes.
Friction tape.
Ford timers.
Top dressing.
Flasl light bulbs.
Bulbs for all automobile lamps—13 sizes.

THE AKRON OIL COMPANY
STATION NO._____

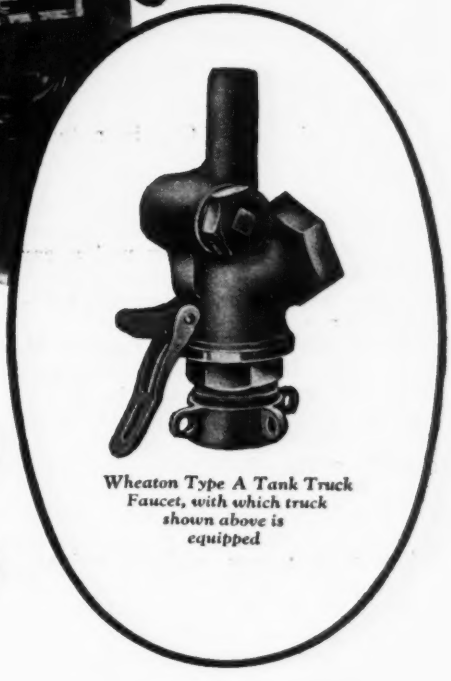
RECORD OF
ACCESSORIES - TIRES - TUBES - SUPPLIES

MONTH_____
PERIOD_____

	Line	DESCRIPTION	Sale Price	Opening Inv.	Inventory Record	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		Cost Each	Inventory Value
						16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
29		Hose			Receipts Sales On Hand																		
30		Upper Ford Radiator			Receipts Sales On Hand																		
31		Lower Ford Radiator			Receipts Sales On Hand																		
32		Clamps			Receipts Sales On Hand																		
33		Lens—Ruby Tail Light			Receipts Sales On Hand																		
34		Liquid X—Small			Receipts Sales On Hand																		
35		Mitten Dusters			Receipts Sales On Hand																		
64		Neatsfoot Compound—½ Pt. Cans			Receipts Sales On Hand																		
36		Oildag			Receipts Sales On Hand																		
37		Penetrating Oil—½Pt. Cans			Receipts Sales On Hand																		
38		Blow Out Patches			Receipts Sales On Hand																		

This is one of five sheets Akron Oil Co., Akron, O., uses to keep continuous check on its service station inventory and sales of automobile necessities. A brief examination of these sheets shows how much of any supply is on hand at a station and what articles have the most frequent turnover

Standard Oil Company (Kentucky) *Uses Wheaton Faucets*



Wheaton Type A Tank Truck Faucet, with which truck shown above is equipped

Send for this Catalog

This book illustrates and describes the full line of Wheaton Faucets, Valves, Joints, Couplings, Fillers, Nozzles, Fittings, etc. If you haven't a copy, send for one today.

BACK in the winter of 1912-13 the Standard Oil Company (Kentucky) bought one sample Wheaton Type A Tank Faucet. For months they tested it. Then they placed their first order. That was in the days of horse-drawn tanks. From that time till this, they have constantly used Wheaton Type A Tank Faucets—made exactly like that first sample, put through test more than a decade and a half ago. And, no doubt, many of the faucets in that initial purchase have been removed from the old horse-drawn tanks and are still in service on the modern motor equipment like the truck shown above.

A. W. WHEATON BRASS WORKS, NEWARK, N. J.

Wheaton

FAUCETS · VALVES · JOINTS · COUPLINGS · FILLERS · NOZZLES · FITTINGS

line dealers and garages. Today, however, there is less possibility of this because of the presence of many cut price accessory jobbers, one Ohio oil man said. Although the margin of profit has diminished considerable good will is obtainable by having on hand things motorists need in emergencies.

The company has a working agreement with a tire distributor to supply any size tire a customer may want. If a customer seeks tire service at an Akron Oil station the station salesman will call the tire company and a service truck will go to the oil company's station. The oil company gets a percentage on the tires and tubes sold under this agreement and has the advantage of having tire service at its call without being forced to employ tire repairmen or invest in repair equipment.

The best seller, said R. C. Witwer, president of Akron Oil, is automobile lamp bulbs. Flashlight cells also have rapid turnover. In summer one of the best sellers, Mr. Witwer said, was the dust mitten. Spotlights, and other articles for "dolling up" a car and the one time accessories which now are regular equipment on automobiles, are not carried.

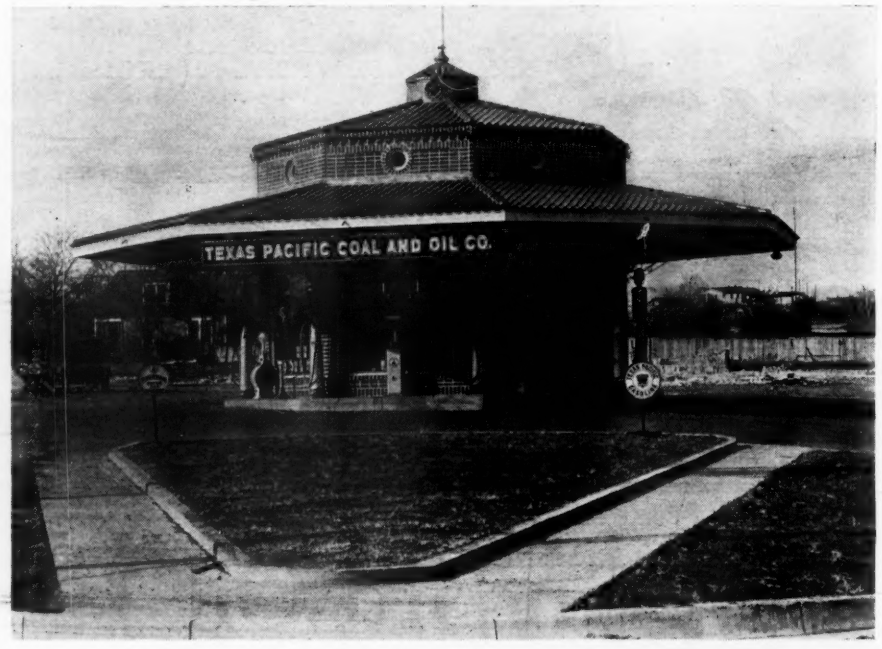
The C. A. Pierce Oil Co., said S. E. McFarren, its general manager, checks its supply inventory by a percentage system which works this way. Say the profit from supplies sent to stations averaged 30 per cent over a six-month period and the profit in any one month fell to 15 or 20 per cent, the company would know something was wrong and investigate.

Vahey Oil Co., Youngstown, is another Ohio marketer which sells automobile supplies at all its stations. J. L. Marsh, general manager, said this business was mostly done to accommodate the motorist. He believes the motorist will quit a gasoline station if too much effort is spent to sell him something for his car which he may not want. But emergency supplies are carried just as they are by the Akron Oil Co.

Mr. Marsh is skeptical of light bulbs. He says damage to an automobile lamp may wipe out the profit on a large number of bulbs. A zealous station salesman may volunteer to put in a new bulb and if anything happens to the reflector or lens the oil company is held liable and if it is liable only morally its profits are hurt because the customer may not return.

LOS ANGELES, Jan. 13.—Norman C. Wells, gas engineer formerly connected with the Southwestern Engineering Corp., is now with the Brooks Engineering Co., Los Angeles, and will give his full attention to the vapor recovery and natural gasoline absorption department, a new department of the company. A full line of refinery equipment including exchanges, condensers, preheaters and coolers, will be manufactured and sold.

Texas Pacific Opens 7 Pump Stations at Fort Worth



Texas Pacific Coal & Oil Co.'s service station at Camp Bowie boulevard and Seventh St., Fort Worth, Texas

FORT WORTH, Jan. 14

THE Texas Pacific Coal & Oil Co. recently opened at Camp Bowie Blvd. and 7th St., the show place among service stations in Fort Worth. The Texas Pacific will market through this station gasolines and lubricants manufactured at its Fort Worth refinery.

F. D. Bostaph, sales manager, furnishes the following description of the station as shown in the accompanying picture:

"It is built throughout of concrete structure steel; solid walls of rock face Thurmar vitrified brick; green tile roof on the building and canopy; cupola of sheet copper; full size basement housing the air compressor units, lubricating oil storage tanks and frigid air."

The three 1000-gallon tanks are underground at the rear of the station. All gasoline over-flow and air lines are in a concrete conduit surrounding the building. The top of this conduit is the curb on which the pumps, air units and "lubsters" are placed.

On the curb are seven 10-gallon air operated gasoline pumps, one Bowser "lubster," three air and water units, Eco air machine and three drinking fountains.

Half of the floor space is for the office. In the other half, the ladies' and men's rooms are on either side and the rest of the floor plan to the attendants' room, lockers and so forth.

The steel enameled sign on the canopy is of red Neon lights; there is also a circle of blue tubes around the building at the eaves and another circle of red tubes around the top of the copper cupola.

Paving is of brick on concrete base, grouted with red cement. There are no lines of any kind connecting to the building above ground. All water, gas air, electric and telephone lines are in underground circuit.

Belk Resigns as Head Of Virginia Jobbers

RICHMOND, Va., Jan. 14.—J. B. Belk, president of the Albemarle Oil & Gas Co., Charlottesville, Va., has resigned as president of the Virginia Independent Oil Men's Association. Mr. Belk said he accepted re-election as president of the association reluctantly at the convention in Norfolk last October but did agree to serve until the association's code of ethics was completed. Mr. Belk submitted his resignation at a meeting of the board of directors here Jan. 10.

Until the next election P. S. Ford, Martinsville, Va., who was elected first vice-president at the October convention, will serve as president. M. B. Whiting, Whiting Oil Co., Clifton Forge, Va., will be secretary and treasurer, succeeding W. M. Eller, of the Delta Oil Co. and City Point Terminal Co., Petersburg.

Directors appointed a special committee on legislation, consisting of Mr. Ford, Mr. Whiting and T. C. Watkins.

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BEAUMONT, TEX.
PENSACOLA, FLA.

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ARDMORE, OKLA.
SMITH'S BLUFFS, TEX.
HEATH, OHIO
MARCUS HOOK, PA.
CABIN CREEK JCT., W. VA.

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Compilation Of Mid-Continent Refinery Operations

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National Petroleum News

Mid-Continent Refinery Operations Week Ended January 13 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	North La.-Ark.	Total Week Ended Jan. 13	Total Week Ended Dec. 16
Plants Reporting	12	28	7	12	79	79
Crude Capacity (bbls.)	92,000	157,200	104,500	54,900	408,600	408,600
Cracking Capacity	30,700	52,600	16,200	22,700	122,200	122,200
Da. Av. Crude Runs	50,314 + 0.2	96,134 + 16.5	56,754 — 11.8	35,826 — 1.4	239,028 + 2.4	263,007
Da. Av. Other Oils	5,751 + 1.4	490 — 86.6	5,095 + 18.2	654 — 78.6	11,990 — 28.2	12,418
GASOLINE—Gallons						
Stocks, Jan. 6	12,576,000	45,031,000	19,066,000	3,293,000	79,966,000	68,271,000
Prod. 1-6 to 1-13	7,372,000 — 6.4	14,379,000 + 15.7	6,742,000 + 2.9	3,271,000 + 10.5	31,764,000 + 6.5	34,105,000
Ship. 1-6 to 1-13	8,498,000 + 23.2	14,413,000 + 9.6	7,440,000 + 9.4	3,276,000 — 10.0	33,627,000 — 10.3	30,627,000
Stocks, Jan. 13	11,450,000 — 9.0	44,997,000 — 0.1	18,368,000 — 3.7	3,288,000 — 0.2	78,103,000 — 2.3	71,749,000
Ratio Sales to Prod.	115.3%	100.2%	110.4%	100.2%	105.9%	89.8%
KEROSENE—Gallons						
Stocks, Jan. 6	3,669,000	7,517,000	2,214,000	640,000	14,070,000	14,475,000
Prod. 1-6 to 1-13	1,598,000 + 15.9	2,224,000 + 37.1	1,402,000 — 5.1	731,000 — 8.7	5,955,000 + 12.8	6,145,000
Ship. 1-6 to 1-13	2,025,000 + 19.5	2,233,000 + 7.1	1,461,000 + 9.8	744,000 — 1.5	6,463,000 + 10.2	6,248,000
Stocks, Jan. 13	3,242,000 — 11.6	7,508,000 — 0.1	2,155,000 — 2.7	657,000 — 1.9	13,562,000 — 3.6	14,372,000
Ratio Sales to Prod.	126.7%	100.4%	104.2%	101.8%	108.5%	101.7%
STOVE DISTILLATE—Gallons						
Stocks, Jan. 6	2,172,000	4,531,000	1,013,000	79,000	7,795,000	11,728,000
Prod. 1-6 to 1-13	282,000 + 29.4	902,000 + 59.9	210,000 — 7.9	30,000 — 43.4	1,424,000 + 34.0	1,327,000
Ship. 1-6 to 1-13	781,000 — 24.7	1,475,000 + 26.1	225,000 + 23.0	48,000 +140.0	2,529,000 + 4.9	2,125,000
Stocks, Jan. 13	1,673,000 — 23.0	3,958,000 — 12.6	998,000 — 1.5	61,000 — 22.8	6,690,000 — 14.2	10,930,000
Ratio Sales to Prod.	276.9%	163.5%	107.1%	160.0%	177.6%	160.1%
GAS OIL—Gallons						
Stocks, Jan. 6	7,628,000	36,380,000	13,988,000	6,573,000	64,569,000	72,905,000
Prod. 1-6 to 1-13	1,125,000 — 15.3	2,080,000 — 44.4	940,000 — 29.9	1,679,000 — 4.0	5,824,000 — 28.6	5,372,000
Ship. 1-6 to 1-13	1,357,000 — 3.8	2,431,000 — 60.9	736,000 — 35.3	2,171,000 — 16.3	6,695,000 — 41.1	8,485,000
Stocks, Jan. 13	7,396,000 — 3.0	36,029,000 — 1.0	14,192,000 + 1.5	6,081,000 — 7.5	63,698,000 — 1.3	69,792,000
Ratio Sales to Prod.	120.6%	116.9%	78.3%	129.3%	115.0%	157.9%
FUEL OIL—Gallons						
Stocks, Jan. 6	13,851,000	33,350,000	39,746,000	11,680,000	98,627,000	104,439,000
Prod. 1-6 to 1-13	5,081,000 — 13.3	5,520,000 + 36.6	7,718,000 — 10.4	4,871,000 — 22.4	23,190,000 — 6.5	27,784,000
Ship 1-6 to 1-13	6,527,000 + 2.9	7,742,000 + 5.0	8,310,000 + 11.5	5,464,000 + 2.6	28,043,000 + 5.8	28,069,000
Stocks, Jan. 13	12,405,000 — 10.4	31,128,000 — 6.7	39,154,000 — 1.5	11,087,000 — 5.1	93,774,000 — 4.9	104,154,000
Ratio Sales to Prod.	128.5%	140.3%	107.7%	112.2%	120.9%	101.0%

Gasoline Produced by Various Methods, Week Ended January 13

	Kansas	% of Total	Oklahoma	% of Total	Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	4,634,000	62.9	11,334,000	78.8	5,511,000	81.7	1,310,000	40.1	22,789,000	71.8
Cracked	2,167,000	29.4	2,363,000	16.4	968,000	14.4	1,434,000	43.8	6,932,000	21.8
Natural	571,000	7.7	682,000	4.8	263,000	3.9	527,000	16.1	2,043,000	6.4
Total	7,372,000		14,379,000		6,742,000		3,271,000		31,764,000	

+ or — columns are % change over previous week.

Mid-Continent Makes Further Reduction in Stocks

Staff Special—By Telegraph
TULSA, Jan. 17

FOR the second consecutive week refiners in the Mid-Continent field reduced stocks of all principal refined commodities according to reports gathered by NATIONAL PETROLEUM NEWS from 79 plants, representing about 60 per cent of the operating capacity of the field. Crude runs during the week were held almost as low as during the first week of the year when new low records for the past two years were established in two states. Shipments of all commodities except gas oil showed a substantial increase.

Probably the most remarkable feature of the current report is the fact that reporting refiners reduced their stocks of gasoline nearly 2,000,000 gallons during the week. A year ago in the corresponding week the

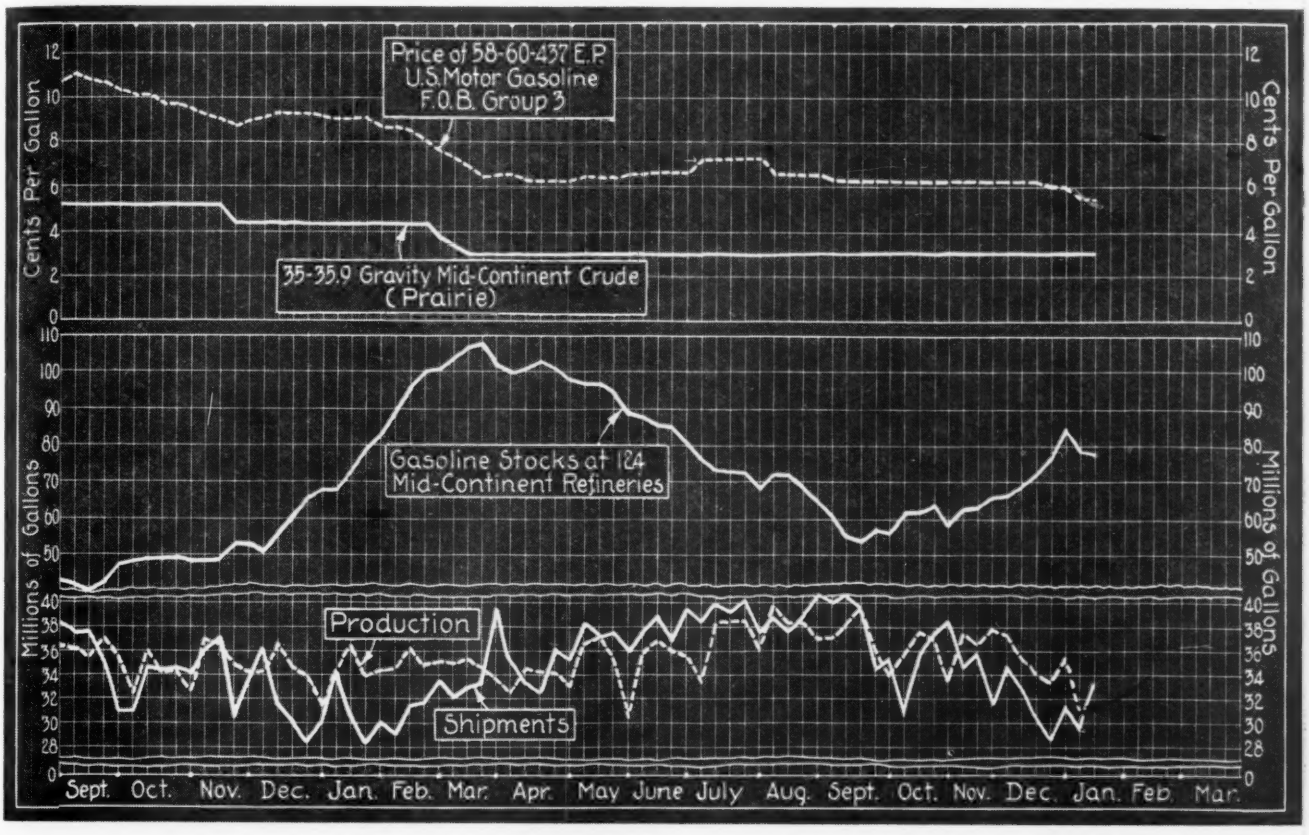
Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended Jan. 13. Change in stocks figured from Dec. 16.

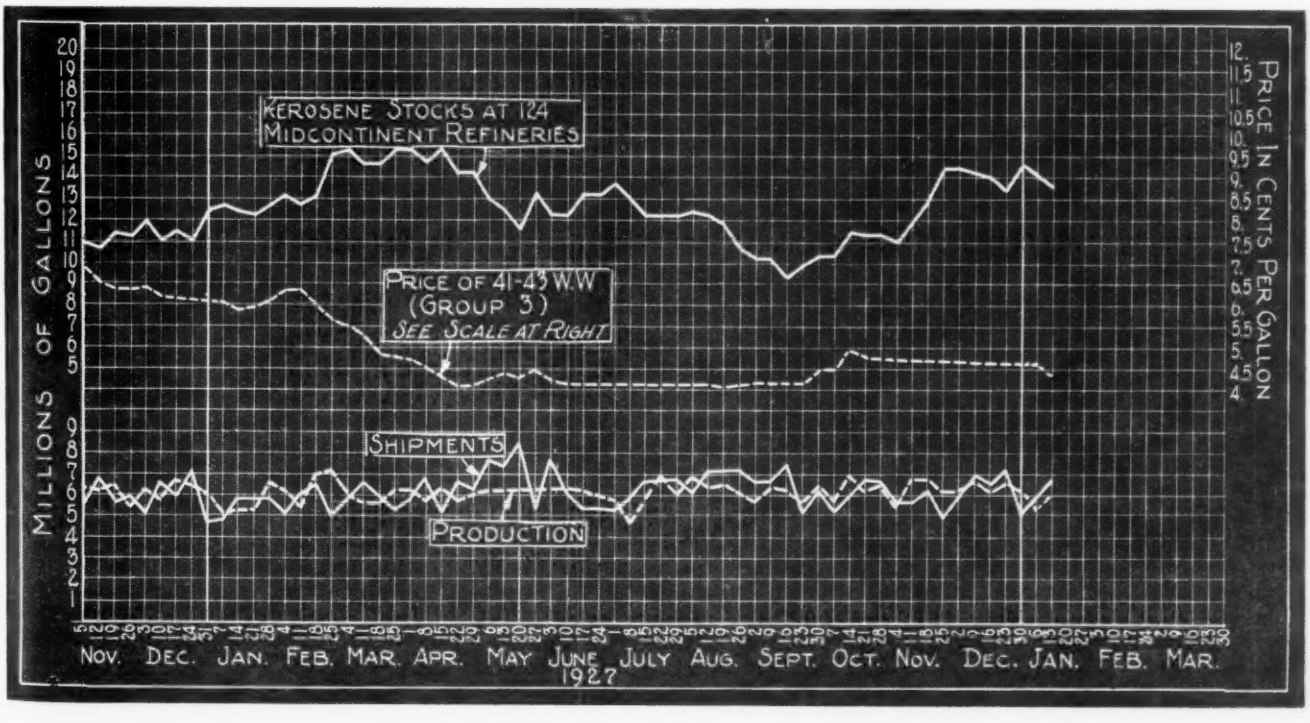
	Gallons
GASOLINE	
Production	129,725,000
Shipments	123,371,000
Net change in stocks	+6,354,000
Ratio sales to production	95.1%
KEROSENE	
Production	23,820,000
Shipments	24,630,000
Net change in stocks	—810,000
Ratio sales to production	103.4%
STOVE DISTILLATE	
Production	4,930,000
Shipments	9,170,000
Net change in stocks	—4,240,000
Ratio sales to production	186.0%
GAS OIL	
Production	25,493,000
Shipments	31,587,000
Net change in stocks	—6,094,000
Ratio sales to production	123.9%
FUEL OIL	
Production	103,284,000
Shipments	113,664,000
Net change in stocks	—10,380,000
Ratio sales to production	110.0%

Barometer of Mid-Continent Refinery Market—Week Ending January 13

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 124 Plants to National Petroleum News

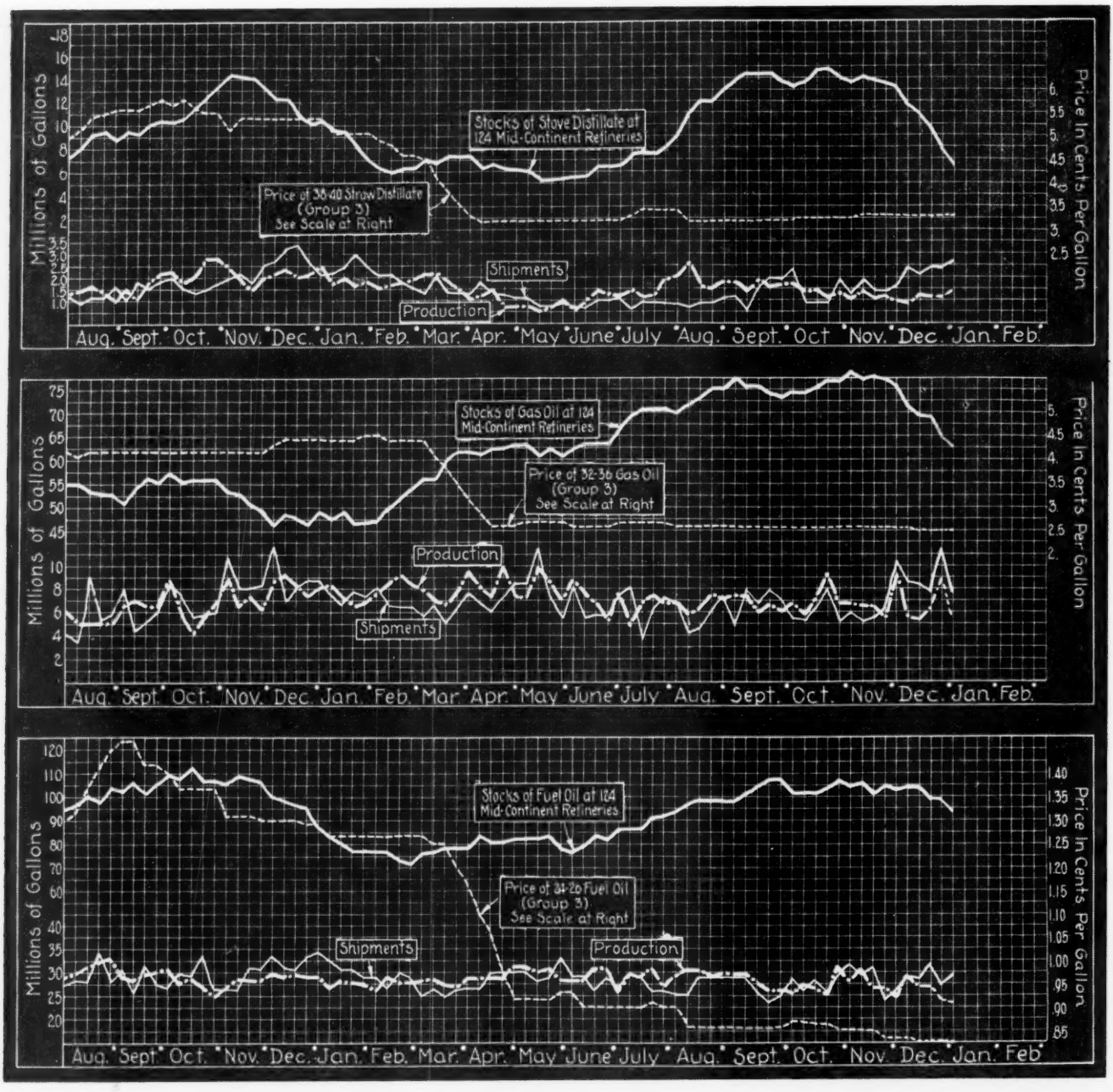

Price of 58-60-437 E.P. U.S. Motor Gasoline F.O.B. Group 3
35-35.9 Gravity Mid-Continent Crude (Prairie)
Cents Per Gallon
Gasoline Stocks at 124 Mid-Continent Refineries
Millions of Gallons
Production
Shipments
Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and production are extended to date shown in table on opposite page


KEROSENE STOCKS AT 124 MIDCONTINENT REFINERIES
PRICE OF 41-43 W.W (GROUP 3) SEE SCALE AT RIGHT
SHIPMENTS
PRODUCTION
MILLIONS OF GALLONS
PRICE IN CENTS PER GALLON
NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC. JAN. FEB. MAR.
1927

Barometer of Mid-Continent Refinery Market—Week Ending January 13

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 124 Plants to National Petroleum News


Millions of Gallons
Price In Cents Per Gallon
Stocks of Stove Distillate at 124 Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) See Scale at Right
Shipments
Production
Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct Nov. Dec. Jan. Feb.
Millions of Gallons
Price In Cents Per Gallon
Stocks of Gas Oil at 124 Mid-Continent Refineries
Price of 32-36 Gas Oil (Group 3) See Scale at Right
Production
Shipments
Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb.
Millions of Gallons
Price In Cents Per Gallon
Stocks of Fuel Oil at 124 Mid-Continent Refineries
Price of 34-26 Fuel Oil (Group 3) See Scale at Right
Shipments
Production
Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb.

same group of refiners showed a small reduction in gasoline stocks as a result of a big export order but the reduction was a small one and was made in only one week.

Shipments of gasoline increased 3,000,000 gallons during the week to 33,627,000 gallons while production was increased less sharply to 31,764,000 gallons. On Jan. 13 stocks at all reporting plants totaled 78,103,000 gallons as compared with 79,966,000 gallons on Jan. 6 and 80,631,000 gallons on Dec. 30. A year ago for the corresponding week gasoline production was 34,473,000 gallons, shipments were 34,560,000 gallons and stocks on Jan. 14, 1927, totaled 68,030,000 gallons.

Every group in the field showed a withdrawal of gasoline from storage. Kansas refiners led the list with a draft of 1,120,000 gallons. Oklahoma plants reduced their stocks 44,000 gallons, north Texas 698,000 gallons and north Louisiana and Arkansas 5,000 gallons.

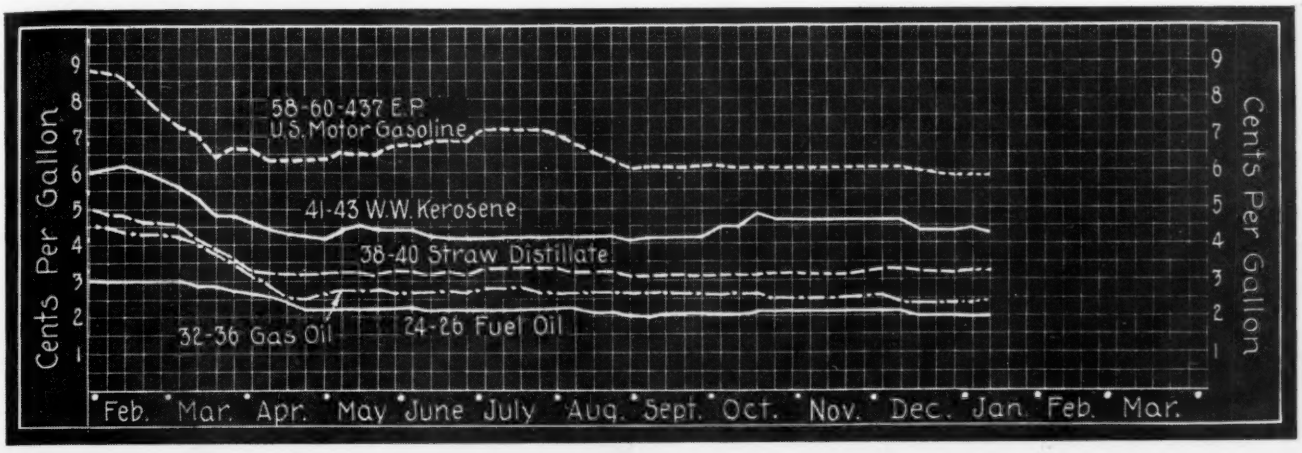
Crude oil charged to stills of reporting refiners averaged 239,028 barrels per day as compared with 233,425 barrels per day during the first week of the year and 277,629 barrels per day during the corresponding week a year ago. Charges of partly refined oils to stills were decreased 4,700 barrels daily average to 11,990 barrels per day.

Kerosene shipments at all plants increased 600,000 gallons during the week to 6,463,000 gallons and production increased about the same amount to 5,955,000 gallons. Stocks were reduced 500,000 gallons to 13,562,000 gallons.

Refiners continued to work off their reserve stocks of stove distillate during the week at about the same rate which has been maintained during the past six weeks. Production for the week was 1,424,000 gallons and shipment 2,529,000 gallons causing a reduction in stocks of 1,100,000 gallons to 6,690,000 gallons. A year ago distillate stocks totaled 9,556,000 gallons at the same plants.

Gas oil shipments were down to 6,695,000 gallons during the week

Current Prices of Principal Mid-Continent Refined Products


Cents Per Gallon
58-60-437 E.P. U.S. Motor Gasoline
41-43 W.W. Kerosene
38-40 Straw Distillate
32-36 Gas Oil
24-26 Fuel Oil
Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.

Prices shown are on Group 3 basis and extended to date shown in Refinery Market Tables Section of this Issue

but production was reduced also to 5,824,000 gallons with the result that stocks were cut nearly 900,000 gallons to 63,698,000 gallons.

Production of fuel oil was down 1,600,000 gallons during the week to 23,190,000 gallons while shipments increased 1,500,000 gallons to 28,043,000 gallons. Stocks at all reporting plants were cut nearly 5,000,000 gallons to 93,774,000 gallons.

Tax Division Committee To Meet Jan. 25

CHICAGO, Jan. 14.—The committee appointed by the tax division of the American Petroleum Institute during its meeting here in December, to study problems of taxation and legislation, will hold its first conference in Chicago Jan. 25. Chairman Frank E. Packard, tax attorney for Standard Oil Co. of Indiana, has written the committee members calling the meeting for that tentative date.

The committee consists of Edwin Higgins, Chamber of Mines and Oil, Los Angeles; James J. Cosgrove, The Texas Co., New York; James A. Carroll, Prairie Oil & Gas Co., Independence, Kan.; James A. Gilmore, secretary of the American Oil Men's Association, Chicago; George S. Allee, president of the Missouri Oil Men's Association, and Harry H. Smith, secretary of the Mid-Continent Oil & Gas Association, Tulsa.

The first meeting will be for organization. The assignment given the committee was to study all legislation affecting the oil industry, proposed legislation as well as existing laws; to co-operate with oil associations and local groups of oil men in fighting new legislation harmful to the oil business, and to develop plans for lightening the oil industry's burden of taxation and regulation.

In his address before the tax division of the institute, at the time the committee was appointed, Mr. Packard recommended a clearing house of legislative information for the oil industry—an office with no other function than to keep oil company executives informed about legislation affecting them. His idea was that interested companies could develop their own methods of attack in each individual case.

Acewood Leases Storage

NEW YORK, Jan. 13.—Acewood Petroleum Co., marketers and brokers, with headquarters at 17 Battery Place, New York City, has leased approximately 7,000,000 gallons of clean storage at Bayway, N. J. from the Galena Signal Oil Co. of Pennsylvania.

The deal was completed in short order. Negotiations for the lease were entered into seriously on Jan. 11, and in less than 24 hours Acewood started unloading its first cargo of gasoline in the newly acquired storage. Tank car shipments will start rolling from Bayway as soon as cars can be switched down from Tappan, N. Y. where the company already has a terminal.

With storage at Bayway, large distribution in northern New Jersey for which they could not compete advantageously from Tappan, due to freight rates, is made possible.

W.P.R.A. To Meet At Kansas City

TULSA, Jan. 16.—Kansas City has been chosen as the meeting place for the annual convention of the Western Petroleum Refiners Association, it is announced by Howard Bennette, managing director. The meeting will be on March 6 at the Muehllbach hotel.

The convention plan will be the same as a year ago. Sessions will be devoted to problems of special interest to executives. There will be no special technical sessions or group meetings for traffic managers and other departments. As in 1927, the technical men will hold regional meetings several times during the year.

North Carolina Jobbers Elect Officers

GREENSBORO, N. C., Jan. 14.—C. S. Wallace, Morehead City, was elected president of the North Carolina Oil Jobbers' association at its meeting Jan. 11 at Charlotte, N. C. E. R. Burt, Biscoa, was elected vice-president and L. H. Martin, Greensboro, secretary-treasurer. New directors are J. P. Flanigan, Statesville; O. A. Costner, Lincolnton; W. N. Holt, Smithfield, and C. K. Boren, Greensboro.

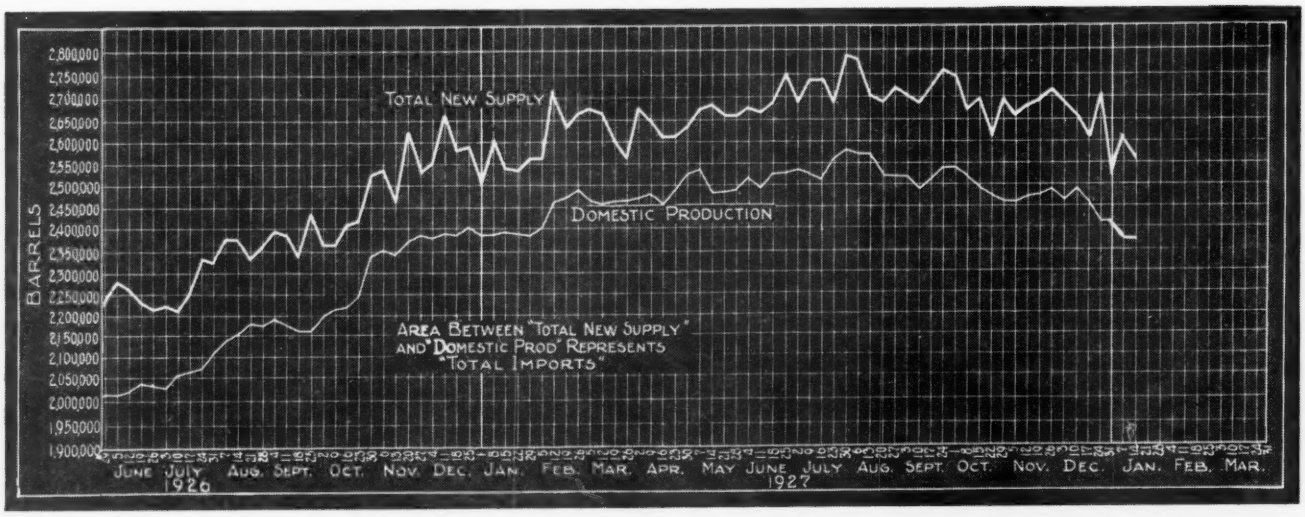
Mr. Wallace has many interests besides an oil business at Morehead City. He is president of the North Carolina railroad, president of the Carolina Motor club which has 10,000 paid members, chairman of the board of Greensboro college, chairman of Louisburg college, and a director in several state institutions. He also conducts a fishing business and a fertilizer factory.

Correction

Illustrations accompanying the article on "Oil Country Wire Rope, Its Use and Care," written exclusively for NATIONAL PETROLEUM NEWS by M. G. Ensinger of the Union Wire Rope Co., Kansas City, in the Nov. 16 issue, page 85, were mis-labeled. Following are the correct labels for these illustrations: page 88, "Three bad socket sets"; page 89, "Crown pulley worn on trunnion from neglected boxes —note trunions"; on page 91, "One cause of damage is due to improper winding on bull-wheel shaft."

LOS ANGELES, Jan. 14.—Mrs. John Teagle of Cleveland, mother of Walter C. Teagle president of the Standard of New Jersey, arrived in Pasadena this week. Mrs. Teagle will spend the winter at the Maryland hotel as has been her custom for the past several years.

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	Jan. 14	Jan. 7
Production east of Rockies	1,757,500	1,754,850
Decrease		2,650
Total production in U. S.	2,373,100	2,379,050
Decrease		5,950
Crude oil imports	188,000	226,143
Decrease		38,143
Total crude supply	2,561,100	2,605,193
Decrease		*44,093

OKLAHOMA

	Jan. 14	Jan. 7
North Braman	3,200	3,050
South Braman	1,950	1,850
Blackwell	3,850	3,850
Hubbard	2,750	2,800
Thomas	1,750	1,800
Tonkawa	15,000	15,000
Garber	10,050	10,150
Burbank	37,050	37,100
Osage, outside Burbank	29,750	29,800
Watchorn	1,200	1,250
Cushing	21,100	21,000
Yale Jennings	9,050	9,000
Davenport	2 200	2,200
Bristow-Slick	24,500	24,500
North Okmulgee	16,000	16,000
Lyons-Deaner	6,100	6,150
Stroud	1,250	1,200
Cromwell	10,700	10,600
Papoose	5,400	5,500
Wewoka	8,750	9,000
Seminole	56,050	53,700
Bowlegs	101,800	102,950
Searight	20,050	20,150
Little River	36,500	36,350
Earlsboro	130,100	124,700
Duncan district	6,750	6,750
Graham	6,300	6,250
Fox	1,850	1,850
Healdton	14,600	14,500
Hewitt	9,000	9,100
Scholem Alechem	12,900	12,750
Others	75,550	74,050
Total Oklahoma	683,050	674,900
Increase		8,150

KANSAS

Greenwood County	30,700	30,800
Florence-Covert	1,450	1,400
Peabody-Elbing	3,750	3,750
Eldorado-Towanda	14,250	14,250
Augusta-Fox-Bush	4,200	4,100
Rainbow Bend	1,950	2,100
Russell	2,300	2,300
Churchill	10,900	12,300
Others	36,000	36,300
Total, Kansas	105,500	107,300
Decrease		1,800

NORTH LOUISIANA

Homer	4,400	4,350
Haynesville	6,350	6,400
Caddo, light	11,750	11,050
Caddo, heavy	4,000	3,900
DeSoto, Red River	4,150	4,250
Elm Grove	650	550
Bellevue	1,050	1,050
Cotton Valley	4,500	4,600
Urania	7,750	7,600
Pleasant Hill	800	850
Total, North Louisiana	45,400	44,600
Increase		800

ARKANSAS

El Dorado	5,200	5,900
Champagnolle	700	.....
Smackover, light	8,750	8,500
Smackover, heavy	68,600	69,000
Stephens	1,150	1,150
Nevada	2,950	2,900
Lisbon	2,500	2,600
Others	100	100
Total, Arkansas	89,950	90,150
Decrease		200

TEXAS (Outside Gulf Coast)

Panhandle District

Hutchinson County	50,300	51,300
Carson County	7,500	7,450
Gray County	16,100	16,500
Wheeler County	1,000	1,200
Others	50	50
Total, Panhandle District	74,950	76,500
Decrease		1,550

North Texas

Burkburnett	12,000	12,050
Electra	11,250	11,500
Iowa Park and K-M-A	1,800	1,850
Wilbarger	10,850	10,950
Archer County	22,500	22,600
Montague-Cooke	14,900	15,000
Others	700	700
Total, N. Tex.	74,000	74,650
Decrease		650

West Central Texas

Stephens County	7,700	7,800
Eastland-Desdemona	8,750	9,000
Brown County	15,600	15,950
Coleman County	1,000	1,050
Callahan County	4,150	4,250
Shackelford County	5,250	5,200
Young County	9,850	9,950
Throckmorton County	1,250	1,200
Palo Pinto County	450	450
Others	2,050	2,100
Total, West Central Texas	56,050	56,950
Decrease		900

West Texas

Jones County	1,250	1,300
Mitchell and Scurry Counties	2,900	3,400
Howard County	6,500	6,200
Reagan County	22,550	22,050
Crane and Upton Counties	105,300	107,100
Crockett County	2,500	2,200
Pecos County	49,500	53,200
Winkler	74,700	61,200
Others	2,300	2,250
Total, W. Tex.	267,500	258,900
Increase		8,600

East Central Texas

Mexia	8,300	8,300
Currie	600	600
Richland	700	700
Wortham	2,200	2,200
Corsicana-Powell	12,800	13,000
Nigger Creek	1,700	1,850
Total, E. Central Texas	26,300	26,650
Decrease		350

Southwest Texas

Luling	13,250	13,500
Lytton Springs	1,600	1,600
Somerset	800	800
Laredo District	7,000	7,100
Piedras Pintas	.....	.....
Dale	400	400
Others	400	400
Total, Southwest Texas	23,450	23,800
Decrease		350
Total, Texas, (Outside Gulf Coast)	522,250	517,450
Increase		4,800

GULF COAST

Coastal Texas

West Columbia	8,300	8,450
Damon Mound	900	900
Big Creek	2,050	2,050
Boling	2,000	2,100
Blue Ridge	3,650	3,950
Pierce Junction	9,200	11,850
Humble	1,900	1,850
Goose Creek	7,200	7,300
South Liberty	2,400	2,200
Hull	11,600	12,050
Saratoga	1,050	1,000
Batson	1,400	1,200
Sour Lake	3,700	3,650
Spindletop	46,800	52,050
Orange County	4,050	4,050
Others	3,350	3,250
Total, Coastal Texas	109,550	117,900
Decrease		8,350

Coastal Louisiana

Vinton	4,550	4,600
Lockport	4,900	5,000
Evangeline	1,050	1,150
Edgerly	2,200	2,350
Others	1,550	1,750
Total, Coastal Louisiana	14,250	14,850
Decrease		600
Total Gulf Coast	123,800	132,750
Decrease		8,950

ROCKY MOUNTAIN

Wyoming

	Jan. 14	Jan. 7
Salt Creek	42,300	42,450
Grass Creek	2,500	2,300
Elk Basin	900	950
Big Muddy	2,650	2,700
Lost Soldier	2,750	2,550
Rock Creek	2,550	2,350
Lance Creek	650	650
Teapot Dome	.....	.....
Others	2,850	3,500
Total Wyoming	57,150	57,450
Decrease		300

Montana

Cat Creek	1,800	1,850
Sunburst	9,000	9,000
Others	200	150
Total, Montana	11,000	11,000

Colorado

Moffat (Craig)	1,100	1,200
Fort Collins	3,000	3,000
Florence	900	800
Others	1,950	1,550
Total, Colorado	6,950	6,550
Increase		400

New Mexico

Table Mesa	.....	450
Artesia	1,450	1,450
Hogback	650	650
Rattlesnake	250	50
Others	100	100
Total, New Mex.	2,450	2,700
Decrease		250
Total, Rocky Mountain	77,550	77,700
Decrease		150

California

Santa Fe Springs	38,500	38,500
Long Beach	115,000	118,000
Huntington Beach	60,000	60,500
Torrance	20,000	20,000
Dominguez	13,500	13,500
Rosecrans	8,000	8,000
Inglewood	31,500	31,500
Midway-Sunset	80,500	81,000
Ventura Avenue	51,500	51,000
Seal Beach	41,000	41,500
Others	156,100	160,700
Total California	615,600	624,200
Decrease		8,600

Eastern

(Including Ill., Ind., Ky., Ohio W. Va., Pa., and N. Y.)	110,000	110,500
Decrease		500

*In computing change in total crude supply in week ended Jan. 7 over Dec. 31, the change should have shown an increase of 83,300 barrels instead of a decrease of 105,578 barrels, in the production summary, page 38, of the Jan. 11 issue.

Test in Township West of Bowlegs Shows Favorably for New Pool

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, Jan. 14

A NEAR-COMPLETION in the general Seminole district held outstanding position in the Mid-Continent through the past week. This was the Indian Territory Illuminating Oil Co.'s test in the SE SW of 16-8-5E, Pottawatomie county, Okla. It is about two miles north of the town of Maud and is in the township next west of the Bowlegs pool.

At the close of the week the well was drilling at 4,255 feet in the Viola lime. Comparisons were being drawn between it and the big well of the Barnsdall Oil Co., in the NE NW of 14-8-5, the latter well being, therefore, 2½ miles east and one mile north of the I.T.I.O. test. The Barnsdall well topped the Viola lime at 4,172 feet and had 79 feet of this formation, going out of it at 4,251 feet and into the Simpson formation which lasted until the Wilcox was reached at 4,291 feet.

The I.T.I.O. well topped the Viola at 4,191 feet. It is 24 feet higher at the surface than is the Barnsdall well, which makes it about five feet higher on the Viola formation.

Within a few days the story was to be told whether this is a well. If it is a producer of the caliber of the Barnsdall well, which is at least a 3,000-barrel well, one can start speculating on the possibility of another major pool. It will be argued, of course, even if the I.T.I.O. test is a producer, that the two wells may be the openers of two separate pools. Time and the drill alone would tell. It was argued, however, that the two discoveries at Bowlegs opened two pools but they later connected. The fact that the two wells in 8-5 check so closely as to sub-surface levels is a suspicious circumstance in favor of the one-pool idea.

The Barnsdall well is shut in most of the time. The owners open it once a week and take out an amount of oil equivalent to the agreed-upon 100 barrels per day. The I.T.I.O. will restrict its well to the same figure if it is a producer. The agreement on this runs to March 1.

Evidence of the present temper of operators is supplied by two more restrictive agreements reached during the week. The Carter Oil Co. had brought in a well making around 1,500 barrels in the NE NW NE of 11-7-6, south of Little River production and between the latter field and the well of Snowden & McSweeney, in the NW corner of 13-7-6. The latter operators have been holding their well in to the 100-barrel figure.

The Carter well called for new drilling. The agreement reached provides for the restriction of this well to 100 barrels. Gypsy Oil Co., Magnolia Petroleum Co. and Sinclair Oil & Gas Co. thereupon stopped work on the completion of rigs they were putting up and Gypsy stopped drilling on the direct east offset to the Carter well. Magnolia, diagonally offsetting the Carter well to the northeast and Independent Oil & Gas Co. directly offsetting to the north, were well along with their wells and the agreement provides that they shall keep on until they reach the Viola lime, where they shall shutdown and give the wells that were shutdown the same length of time as it has taken Magnolia and Independent from Jan. 10 to reach the Viola. The purpose of the agreement is to preserve the status as of Jan. 10 and the arrangement is to last until Feb. 1, when it probably will be renewed.

ANOTHER restrictive agreement was set up in an unusual place. The old Cushing field seldom supplies news any more, but a small campaign that was about to start has been checked. Several weeks ago Gibson & Becker completed a well to the Bartlesville sand on a lease that had been abandoned. Their well, No. 1 Tiger, in the SW NW SW of 17-17-7, drilled between two abandoned upper sand wells, made 480 barrels from the Bartlesville at 2,768-82 feet. As the result of an operators meeting Gibson & Becker agreed to withhold work on No. 3 Tiger; Shaffer Oil & Refining Co. on No. 4 Tiger, an old Layton sand well that had been rigged up for deepening; Bu-Vi-Bar Petroleum Co. on No. 2 Cain, in Sec. 18.

THE Seminole district is now undergoing an authentic decline. It rallied from the cold weather of the holiday season, which caused a drop to 326,000 barrels on Jan. 2, went back to 350,000, but has turned around and headed the other way. The production on Jan. 14 was 335,900 barrels. As of the dates Jan. 6 and 13, the loss was 5,435 barrels, although 8 wells were added to the producing list.

About 8 miles south of the southernmost production in the Burbank field, Prairie Oil & Gas Co. appears to be opening something new. Its test in the SE NE of 11-24N-6E topped the Bartlesville sand at 2,694 feet and at that depth the hole had filled up 1,500 feet with oil. It was shutdown for tankage and will be drilled in within a few days. The nearest production is about 3½ miles north, in the Fairfax, or South Burbank pool.

Logan county, Okla., scene of an extremely deep drilling campaign, supplied a little diversion when the Sinclair Oil & Gas Co.'s No. 1 Weber, SE SE SE of 18-19-4W developed 10,000,000 feet of dry gas at 4,808

(*Continued on Page* 44)

Drilling Operations in Oklahoma, Kansas and Texas, Week Ended January 14, 1928

	January 14					Week Ended January 7				
	Loc.	Rigs	Drg.	S.D.	Total	Loc.	Rigs	Drg.	S.D.	Total
OKLAHOMA										
Burbank	4	18	31	2	55	3	29	20	2	54
Other Osage	2	5	20	3	30	1	5	18	5	29
Bristow-Cushing	7	6	35	7	55	7	6	35	7	55
North Oklahoma	17	8	64	50	139	13	9	69	45	136
South Oklahoma	7	12	109	48	176	8	13	128	32	181
Muskogee	..	5	20	43	68	..	4	48	23	75
Okmulgee-Bristow	8	31	55	23	117	8	31	56	24	119
Seminole Dist	16	27	170	27	240	15	33	183	20	251
Total Oklahoma	61	112	504	203	880	55	130	557	158	900
KANSAS	28	43	105	87	263	25	53	118	67	263
TEXAS										
Central	..	125	206	144	275	..	132	212	125	469
Panhandle	..	100	74	93	267	..	105	77	90	272
N. Central	..	32	80	34	146	..	40	71	38	149
West	..	104	214	149	467	..	109	206	150	455
Laredo	..	1	25	19	45	..	1	25	19	45
Total Texas	....	362	599	439	1,400	....	387	591	422	1,400
NEW MEXICO	....	4	19	22	45	..	4	11	34	49
GRAND TOTAL	89	521	1,227	751	2,588	80	574	1,277	681	2,612

Seminole District Production by Companies and Leases, January 13 and January 6, 1928

Company	Farm	S. T. R.	Jan. 13 Wells	Jan. 13 Prod.	Jan. 6 Wells	Jan. 6 Prod.
BOWLEGS						
Amerada	Rascoe	15- 8-6	8	3,100	8	3,340
Atlantic	Baker	1- 8-6	4	654	4	420
Atlantic	Fleet	23- 8-6	4	510	4	520
Atlantic	Grayson	12- 8-6	3	889	3	1,257
Atlantic	A. Jones	10- 8-6	3	109	3	120
Atlantic	C. Jones	9- 8-6	2	489	2	423
Total Atlantic			16	2,651	16	2,740
Barnsdall	McNac	28- 8-6	1	37	1	38
Barnsdall	Murrow	11- 8-6	4	1,048	4	967
Total Barnsdall			5	1,085	5	1,005
Carter	Bowlegs	15- 8-6	3	1,230	3	1,240
Carter	Burden	23- 8-6	3	415	3	430
Carter	Harjoche	15- 8-6	6	960	6	1,120
Carter	Hilly	23- 8-6	3	650	2	620
Carter	Jones	11- 8-6	1	2,290	3	2,445
Carter	Melisse	9- 8-6	1	880	1	910
Carter	McGeisey	21- 8-6	1	30	1	0
Carter	Walker	15- 8-6	3	480	3	530
Carter	Wise	23- 8-6	12	5,595	12	6,390
Total Carter			33	12,530	34	13,580
Empire	Lacey	15- 8-6	6	811	6	860
Empire	Wise	23- 8-6	2	860	2	840
Total Empire			8	1,671	8	1,700
Gypsy	Bowlegs	22- 8-6	1	210	1	267
Gypsy	Bradley	8- 8-6	1	30	1	35
Gypsy	Cumsey	8- 8-6	4	1,747	4	1,882
Gypsy	Dosar	7- 8-6	1	100	1	102
Gypsy	Grayson	13- 8-6	4	1,327	4	1,675
Gypsy	Harjoche	10- 8-6	1	1,132	1	1,307
Gypsy	Jones	11- 8-6	1	500	1	577
Gypsy	Walker	15- 8-6	8	2,415	8	2,038
Gypsy	Wise	23- 8-6	3	110	3	255
Total Gypsy			24	7,571	25	8,138
Indep. et al	Coker	21- 8-6	1	344	1	28
I. T. I. O.	Barnett	24- 8-6	2	156	2	465
I. T. I. O.	Billington	22- 8-6	5	565	5	375
I. T. I. O.	Bowlegs	22- 8-6	11	1,310	11	1,260
I. T. I. O.	Burden	23- 8-6	1	11	1	11
I. T. I. O.	Davis	13- 8-6	4	1,878	4	1,945
I. T. I. O.	Fay	18- 8-6	8	4,191	8	4,412
I. T. I. O.	Goforth	15- 8-6	11	1,598	11	1,862
I. T. I. O.	Livingston	15- 8-6	11	4,538	11	4,782
I. T. I. O.	Lizzie	11- 8-6	2	781	2	651
I. T. I. O.	Walker	15- 8-6	8	1,307	8	1,230
I. T. I. O.	Wilmont	15- 8-6	4	1,081	4	1,260
I. T. I. O.	Youngblood	22- 8-6	2	140	2	58
I. T. I. O.	Work		1	13	0	0
Total I. T. I. O.			70	17,569	70	18,311
McCulloch	Bowlegs	22- 8-6	3	307	3	350
Magnolia	Davis-BF	13- 8-6	1	658	1	708
Magnolia	Davis-M	13- 8-6	1	471	1	496
Magnolia	Hammond	10- 8-6	2	120	2	180
Magnolia	Rhodes	10- 8-6	2	5,174	2	4,397
Magnolia	Van Buskirk	9- 8-6	1	452	1	194
Total Magnolia			7	6,875	7	5,975
Mid-Continent	Baker	10- 8-6	4	2,095	4	2,304
Mid-Continent	Bowlegs	22- 8-6	1	40	1	105
Mid-Continent	Smith	12- 8-6	5	800	5	875
Total Mid-Continent			11	2,936	11	3,285
Minnehoma	Bowlegs	15- 8-6	3	200	3	112
Prairie	Gahagan	23- 8-6	4	675	4	875
Prairie	Harber	10- 8-6	8	3,710	8	4,665
Prairie	Jones	11- 8-6	4	1,075	4	1,065
Prairie	Templeton	12- 8-6	4	3,270	4	3,760
Prairie	Whitney	23- 8-6	4	430	4	570
Total Prairie			24	9,160	24	10,815
Pure	Reed	14- 8-6	15	4,278	15	4,370
Pure	Strother-D	14- 8-6	4	764	4	895
Pure	Strother-E	14- 8-6	1	0	1	5
Pure	Strother-F	10- 8-6	3	1,293	2	586
Total Pure			22	6,335	22	5,856
Roxana	Taylor	16- 8-6	6	1,528	6	1,439
Shaffer	Lacey	14- 8-6	3	522	3	747
Sinclair	Bowlegs	22- 8-6	1	30	1	0
Sinclair	Cumsey	10- 8-6	3	6,875	3	3,936
Sinclair	Ellen	11- 8-6	6	2,241	6	2,268
Sinclair	Harjo	14- 8-6	3	1,020	3	1,035
Sinclair	Jones	8- 8-6	6	5,512	5	5,841
Sinclair	Taylor	10- 8-6	4	3,845	4	3,622
Sinclair	Walker	22- 8-6	4	885	4	1,000
Total Sinclair			27	18,288	27	17,702
Texas	Reed	14- 8-6	10	3,345	10	3,895
Tidal	Grayson	13- 8-6	3	1,260	4	1,475
Tidal	Harjoche	10- 8-6	6	2,320	6	1,810
Total Tidal			9	3,580	10	3,285
Twin State	Jones	10- 8-6	2	0	2	0
TOTAL BOWLEGS			289	101,633	295	102,403
LITTLE RIVER						
Amerada	Fore	35- 8-6	2	1,280	2	1,275
Amerada	Nitey	35- 8-6	3	2,655	4	2,720
Total Amerada			5	3,935	6	3,995
Barnsdall	Hotulke	22- 7-6	1	0	1	0
Blackwell	Nitey	35- 8-6	8	4,092	8	4,366
Carter	Fish	1- 7-6	4	1,450	4	1,515
Carter	Jackson	11- 7-6	1	100	1	935
Total Carter			5	1,550	5	2,450
Continental	Cosar	2- 7-6	2	620	2	550
Gypsy	Brown	33- 8-6	1	50	1	50
Gypsy	Campbell	36- 8-6	2	140	2	285
Gypsy	Nungee	1- 8-6	1	35	1	60
Gypsy	Pottey	35- 8-6	3	540	3	470
Gypsy	Wadsworth	1- 7-6	1	0	1	0
Total Gypsy			8	765	8	865
Independent	Harris	23- 7-6	1	104	1	104
Indep. et al	Davis	2- 7-6	2	1,942	2	1,020
Total Independent			3	2,046	3	1,124
I. T. I. O.	Campbell	1- 7-6	1	175	1	180
I. T. I. O.	Dungan	35- 8-6	3	2,479	3	3,240
I. T. I. O.	House-MA	1- 7-6	1	396	1	418
I. T. I. O.	House-WE	1- 7-6	1	22	1	72
I. T. I. O.	House-WE	2- 7-6	3	1,942	3	1,720
I. T. I. O.	Jackson	1- 7-6	3	2,491	3	2,012
I. T. I. O.	McCulla	1- 7-6	3	1,097	3	1,240
I. T. I. O.	Nitey	2- 7-6	6	1,453	6	1,380
I. T. I. O.	Phoebe-A	36- 8-6	3	946	3	845
I. T. I. O.	Phoebe-B	36- 8-6	3	431	3	740
I. T. I. O.	Reed	1- 7-6	1	156	1	106
I. T. I. O.	Hull	26- 8-6	1	118	0	0
I. T. I. O.	Sotkneche	1- 7-6	4	1,006	4	940
Total I. T. I. O.			33	12,713	32	13,001
Magnolia	Cruse	2- 7-6	1	750	1	800
Magnolia	Pottey	35- 8-6	2	645	0	0
Mid-Continent	Wadsworth	26- 8-6	7	1,200	7	1,300
Mid-Continent	Smith	12- 8-6	1	35	1	45
Total Mid-Continent			8	1,235	8	1,345
Pine et al	Pottey	35- 8-6	1	1,095	1	1,000
P & R	Dungan	35- 8-6	2	180	2	195
P & R	House	2- 7-6	4	2,320	4	1,930
Total P & R			6	2,500	6	3,125
Roxana	Smith	1- 7-6	1	15	1	10
Shaffer	Narcome	36- 8-6	1	150	0	0
Sinclair	Cosar	36- 8-6	1	1,125	1	940
Snowden et al	Tiger	13- 7-6	1	215	1	277
Superior	Wadsworth	1- 7-6	1	21	1	21
Texas	Coker	1- 7-6	3	685	3	625
Tidal	House	1- 7-6	3	1,660	3	1,902
Tidal	Johnson	1- 7-6	1	50	1	70
Total Tidal			4	1,710	4	1,972
TOTAL LITTLE RIVER			95	35,876	93	36,566
EARLSBORO						
Amerada	Anderson	15- 9-5	3	1,575	3	2,065
Amerada	Cowden	4- 9-5	8	2,340	8	2,315
Amerada	Rodgers	3- 8-5	3	2,290	3	2,310
Total Amerada			14	6,205	14	6,690
Barnsdall	Brown	10- 9-5	4	2,357	4	2,165
Barnsdall	Bruner-F	2- 9-5	2	813	2	250
Barnsdall	Bruner-N	11- 9-5	4	1,683	4	1,645
Barnsdall	Cudjo	11- 9-5	1	27	1	28
Barnsdall	Davis-D	11- 9-5	3	1,824	3	1,197
Barnsdall	Davis-J	11- 9-5	4	755	4	558
Barnsdall	Davis-M	11- 9-5	3	1,760	3	1,572
Barnsdall	Gibson	9- 9-5	7	2,569	7	2,526
Barnsdall	Hearn	15- 9-5	1	6	1	18
Barnsdall	Ingram	4- 9-5	7	4,865	7	7,356
Barnsdall	Pack	10- 9-5	4	178	4	184
Barnsdall	Peter	10- 9-5	4	75	4	261
Barnsdall	Sango	2- 9-5	3	3,206	3	2,570
Barnsdall	Sebolka	15- 9-5	1	890	1	1,036
Barnsdall	Sullivan-H	11- 9-5	2	38	2	26
Barnsdall	Sullivan	10- 9-5	3	83	3	69
Barnsdall	Watsutke	12- 9-5	4	1,464	4	1,498
Total Barnsdall			57	22,593	57	22,959
Carter	Davis	13- 9-5	1	185	1	820
Carter	Payne	12- 9-5	3	790	3	955
Carter	Sango	2- 9-5	4	5,210	4	5,555
Total Carter			8	6,185	8	7,430
Continental	Kays	2- 9-5	2	350	2	425
Continental	Spencer	12- 9-5	4	2,055	4	2,320
Total Continental			6	2,405	6	2,745
Crosbie	Bryant	9- 9-5	2	35	2	325
Empire	Barker	12- 9-5	1	2,692	1	3,112
Empire Edmundson		3- 9-5	3	1,212	3	1,360
Total Empire			4	3,904	4	4,472
Gypsy	Bruner	10- 9-5	4	2,187	4	2,050
Gypsy	Carter	11- 9-5	11	3,270	11	4,962
Gypsy	Earl	16- 9-5	1	20	1	27
Gypsy	Hunick	5- 9-5	1	2,257	1	2,415
Gypsy	Noble	12- 9-5	4	4,997	4	5,182
Gypsy	Peter	10- 9-5	6	155	6	152
Gypsy	Sango	1- 9-5	4	6,787	4	7,042
Gypsy	State	16- 9-5	4	1,142	4	1,117
Total Gypsy			35	20,822	35	22,967
Independent	Bruner	10- 9-5	4	30	4	170
Indep.	Gaines	11- 9-5	2	1,165	2	1,265
Indep.	Knapp	8- 9-5	5	3,009	5	3,275
Indep.	O'Dell	4- 9-5	4	20	4	85
Indep.	Sullivan	10- 9-5	4	20	4	25
Total Independent			19	4,244	19	4,820
Magnolia	Bryant	9- 9-5	6	2,319	6	2,586
Magnolia	Cowden	4- 9-5	4	97	4	94
Magnolia	Edmundson	3- 9-5	3	24	3	64
Magnolia	Holmsley	11- 9-5	8	4,478	8	2,093
Magnolia	Ingram	10 -9-5	1	35	1	30
Magnolia	Lena	10- 9-5	3	84	3	98

(*Continued on Page 43*)

Seminole District Production by Companies and Leases, January 13 and January 6, 1928

(*Continued from Page 42*)

Company	Farm	S. T. R.	Jan. 13 Wells	Jan. 13 Prod.	Jan. 6 Wells	Jan. 6 Prod.
Magnolia	Seay	12- 9-5	8	5,270	8	4,533
Magnolia	Simpson	10- 9-5	4	388	3	360
Magnolia	Sparks	11- 9-5	7	2,824	7	3,001
Magnolia	Sullivan	12- 9-5	3	485	3	873
Total Magnolia			49	16,047	48	13,732
Mid-Continent	McCumber	9- 9-5	7	920	7	1,245
Mid-Kansas	Anderson	14- 9-5	4	355	4	529
Phillips	Dunnaway	15- 9-6	1	20	1	30
Phillips	Graham	9- 9-5	7	195	7	207
Total Phillips			8	215	8	237
Prairie	Baker	23- 9-5	1	50	1	50
Prairie	Davis	13- 9-5	4	1,165	4	1,125
Prairie	Graham-C	3- 9-5	2	70	2	72
Prairie	Graham-O	10- 9-5	4	2,210	4	2,380
Prairie	Stidham	11- 9-5	13	5,375	13	5,290
Total Prairie			23	8,870	23	8,917
Roxana	Bayliss	17- 9-5	1	18	1	19
Roxana	Spencer	12- 9-5	2	2,436	2	2,665
Total Roxana			3	2,454	3	2,684
Shaffer	Clark	1- 9-5	5	1,376	5	1,599
Sinclair	Foreman	18- 9-5	1	15	1	15
Sinclair	Hollins	12- 9-5	3	750	3	705
Sinclair	Sango	2- 9-5	1	3,950	1	5,510
Total Sinclair			5	4,715	5	6,230
Skelly	Spencer	12- 9-5	2	831	2	1,001
Texas	Anderson	2- 9-5	6	1,260	6	1,277
Texas	Brown	10- 9-5	8	2,420	8	2,800
Texas	Rodgers	5- 9-5	3	5,045	3	5,285
Texas	Wilmont	10- 9-4	6	3,635	6	3,424
Total Texas			23	12,360	23	12,786
Tidal	Watkins	9- 9-5	6	2,950	6	2,820
Twin State	Barker	12- 9-5	4	25	4	150
Twin State	Hearn	2- 9-5	3	6,410	3	5,180
Total Twin State			7	6,435	7	5,330
TOTAL EARLSBORO			291	124,020	288	129,418
TOTAL LITTLE RIVER			95	35,876	94	36,566
TOTAL SEARIGHT			70	19,606	69	20,626
TOTAL BOWLEGS			298	101,633	295	102,403
BARNSDALL FIFE			1	100	0	0
TOTAL SEMINOLE			319	56,738	319	54,295
GRAND TOTAL SEMINOLE AREA			1,074	337,873	1,066	343,308
Avg. Per Well				315		322

Completions in N. E. Central, West, Panhandle and North Texas, Week Ended January 14, 1928

NORTH AND EAST-CENTRAL-TEXAS

Brown County

Company	Well Farm	Location Survey	Depth	Init. Prod.
Amerada	4-Gilbraith	SA&MG	1330-1343	34
Wheelock et al	7-Smith	SA&MG	1328-1335	35
Daniels et al	1-Alcorn	Honeycutt	1125-1134	115
Pennock	1-Childress	H&TB	913-915	6M
Gilman et al	1-Hickman	Benson	T.D. 1300	Dry
Cranfill et al	1-DeBusk	Padillo	T.D. 1408	Dry
Wanon Dev	1-Alcorn	Honeycutt	T.D. 1770	Dry
Humphreys Bros	1-Beasley	H&TC	T.D. 1472	Dry
Massey	1-Stewart	Hogelin	T.D. 1648	Dry
Ditto Oil Interest	1-Taylor	Whittington	T.D. 1485	Dry
Lamb	2-Gawthney	Harris	T.D. 1508	Dry
Hammon et al	1-Simpson	Vaughn	T.D. 1340	Dry

Shackleford County

Hyde	2-Moberly	T&P	T.D. 1330	Dry

Young County

Roxana	9-Scott	Garett	T.D. 4475	Dry
Hines et al	1-Griswell	Reeder	2990-2998	40
Ruthada	3-Stovall	Tobin	3987-4445	75
Ruthada	4-Stovall	Tobin	3886-3954	150

NORTH TEXAS

Archer County

Seaberry et al	2-Perkins	DCSL	535-549	10
Cont'l. Perkins et al	6-Wilson	ATNC	1240-1238	7
Wilson	3-Farmer	N A R	1525-1529	79
Raysor et al	1-Ebnother	Harris	T.D. 1558	Dry
Burns et al	2-Burns	Harris	T.D. 1556	Dry
Rose et al	1-Garvey	TE&L	T.D. 904	Dry
Rose et al	1-Morrison	TE&L	T.D. 1534	Dry
Roberts	4-Garvey	TE&L	T.D. 915	Dry

Cooke County

Rightaway	2-MKT	MKT	1314-1320	10

Montague County

Bridwell et al	1-Cunningham	Edmondson	T.D. 1651	Dry

Wilbarger County

Phillips	2-Waggoner	H&TC	1917-1834	14

Young County

Roberts	1-Stewart	Harmon	T.D. 897	Dry
Hines et al	1-Gregg	Cantwell	T.D. 651	Dry

PANHANDLE

Carson County

Company	Well Farm	Location Survey	Depth	Init. Prod.
Texas	1-Nalkn	I&GN	2300-2533	37M

Gray County

Operators	1-Jackson	H&GN	2335-3000	600

Hutchinson County

Midwest Explo	7-Whittenburg	M&C	T.D. 2975	Dry

WEST TEXAS

Crane County

Magnolia	15-Hardwick	Univ.	2824-2878	300
Simms et al	8-Univ.	Univ.	2813-2963	75

Crockett County

Shaffer et al	2-Univ.	Univ.	T.D. 2635	Dry
Penn	1-Powell	GC&SF	T.D. 3001	Dry
Kelly et al	1-Todd	GC&SF	T.D. 2500	Dry

Pecos County

McMann	1-Richards	CT&ME	1310-1450	35
Humble	3-Smith	TC	1316-1460	45
Roxana	5-Tippett	TC	1248-1352	740
Marland et al	12-Yates	TC	1260-1344	80
Humble	4-Smith	TC	1490-1670	215
Roxana	2-Smith	GC&SF	1495-1578	20
The California	6-Yates	GC&SF	1094-1247	130
Gulf Prod	4-Smith	TC	1280-1425	750
Mid-Kansas et al	5-Smith	TC	1165-1305	200
Marland	10-Yates	I&GN	973-1014	300
Mid-Kansas et al	17-Yates	I&GN	1010-1075	950
Mid-Kansas et al	4-Yates	I&GN	1103-1144	550
Mid-Kansas et al	8-Yates	I&GN	T.D. 602	2830
Mid-Kansas et al	9-Yates	I&GN	915-960	515

Presidio County

Hadlock et al	1-Toole	D&P	T.D. 3512	Dry

Upton County

Texas	5-Perry	GC&SF	2015-2069	25

Valverde County

Douglas	1-Sellers	I&GN	T.D. 4050	Dry

Winkler County

Atlantic	1-Hendricks	PSL	2828-3019	3166

Completions in North Louisiana and Arkansas, Week Ended January 13, 1928

Louisiana—Caddo Parish—Pine Island

Company	Well	Location	Depth	Yield
Stand. Oil Co. of La.	Stills No. 191	27-21-16	1900	dry, aband.
Stand Oil Co. of La.	J. J. Hart No. 16	34-21-16	1840	80 bbls.
Bussa & McGoldrick	Bickham No. 7	28-21-15	1603	10 bbls.
Texas Company	C. M. L. Co. No. 50	23-21-15	3940	50 bbls.
Palmer Corporation	Sellington No. 1	17-21-14	4395	junked, aband

Caddo Parish—Waskom

Ferguson et al	Z. Abney No. 3	7-17-16	970	5M gas
Waterman Brick Tile Co.	Waterman Lbr. Co. No. 1	18-17-16	2340	1M gas

Caddo Parish—Elm Grove

Woodley Pet. Co.	Knight B-5	39-15-12	1921	6M gas

DeSoto Parish—Pleasent Hill

Benson Oil Co.	Wolf No. 1	3-10-13	3025	110 bbls.

Richland Parish

South. Carbon Co.	Sartor No. 1	20-16-6 E	2448	50M gas

Waskom—Harrison County—Texas

State Line O. & G. Co.	Z. Abney No. 1	Anderson HRS	962	3M gas

Company	Well	Location	Depth	Yield
Tylong O. & G. Co.	Vaughan No. 3	Anderson HRS	959	5M gas
A. L. Waller et al	J. M. Bryson No. 4	Anderson HRS	1933	6M gas

Panola County

Bethany O. & G. Co.	Burns No. 4	Birdsong HRS	1015	5M gas
S. H. Gardner et al	Roquemore No. 2	Jordan HRS	1062	6M gas
Magnolia Pet. Co.	J. M. Trosper No. 3	Shandoin HRS	1023	7M gas
D. Thomason	Crenshaw No. 2	Womack HRS	2350	4M gas

Arkansas—Nevada County

Humble O. & R. Co.	Groves B-4	1-14-21	1140	75 bbls.
O'Brien et al	Moss 1-A-15	1-14-21	1170	100 bbls.
Wright Oil Co.	Groves No. 3	12-14-21	1151	30 bbls.

Union County (Champagnolle)

Keen & Woolf	Gregory No. 1	10-17-14	2749	1200 bbls.
Ohio Oil Co.	Crain No. 7	1-17-14	3033	2400 bbls.
Ohio Oil Co.	Rich Pumphrey No. 2	2-17-14	3014	8M gas

Completions in Oklahoma and Kansas, Week Ended January 14, 1928

OKLAHOMA

Bryan County

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	1	NWc SW NW 26-5-7 E	T.D. 2210	Dry

Carter County

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	1	SWc NW SE 26-2-2 W	T.D. 4205	Dry
Magnolia	1	NEc SW 17-2-2 W	2328-2338	130

Creek County

Company	Well No.	Location	Depth	Init. Prod.
Future	2	SWc NW SW NE 2-16-11 E	2655-2660	80
Mid-Cont.	1	SWc NE NE 18-14-10 E	3421-3423	39

Garfield County

Company	Well No.	Location	Depth	Init. Prod.
Knox	1	NEc SW 26-22-4 W	1775-1781	4

Grant County

Company	Well No.	Location	Depth	Init. Prod.
Argo	1	SWc SE SE 15-27-3 W	4010-4020 OWD	2M
Blackwell	4	SEc NE NE NE 22-27-3 W	4125-4159 OWD	30 & 2½M

Grady County

Company	Well No.	Location	Depth	Init. Prod.
Okla Gas Utilities	3	SEc SW SE 23-5-6 W	T.D. 2400	40M
Carter	3	NWc SW NW 26-5-6 W	2032-2400	17M
Marland	5	SWc NW 16-3-5 W	2277-2300	125
Magnolia	1	CSL SE SE 11-5-8 W	T.D. 4600	Dry
Carter	2	NWc SW NW 22-3-5 W	T.D. 1716	Dry

Hughes County

Company	Well No.	Location	Depth	Init. Prod.
McCullough	1	SEc NW 16-9-9 E	T.D. 4205	Dry
Prairie	1	NWc NW NE 20-8-10 E	T.D. 3504	Dry

Kay County

Company	Well No.	Location	Depth	Init. Prod.
Globe	1	SEc 8-27-1 W	T.D. 3513 OWD	Dry
Otstot et al	2	NWc SE SW 36-28-1 W	837-845	1.8M

Lincoln County

Company	Well No.	Location	Depth	Init. Prod.
Shaffer	2	SWc SE 31-17-5 E	4234-4242	1214

Muskogee County

Company	Well No.	Location	Depth	Init. Prod.
Williams	3	CWL NE NW 17-15-17 E	1250-1435	30&5M
Hale et al	1	NEc NW SW SE 6-14-19 E	816-828	25
Sommerville	4	C N½ NE NE 17-15-17 E	T.D. 1498	Dry
Sommerville	1	SWc SE NE 4-13-19 E	T.D. 1620	Dry

Okfuskee County

Company	Well No.	Location	Depth	Init. Prod.
Robinson et al	13	C SE SW 24-11-11 E	T.D. 3530	Dry

Okmulgee County

Company	Well No.	Location	Depth	Init. Prod.
Kirkland et al	3	CEL SE 8-15-13 E	T.D. 2890	Dry
Saint et al	1	NEc SW NW 12-14-12 E	2106-2146	20
Empler	1	SWc NE NE 22-15-11 E	2111-2135	25
McBrayer et al	1	SEc SW NW 9-15-14 E	1811-1818	33¾M

Osage County

Company	Well No.	Location	Depth	Init. Prod.
Kewanee	7	SWc NW SE 34-27-6 E	2752-2832	320
Kewanee	8	SEc NW NE 3-26-6 E	2745-2815	400
Brown	1	NWc NE 7-24-8 E	2568-2576	5
Smith	2	SEc NE 5-22-12 E	1865-1889	5
Okla. Nat.	776	SEc NW NE 33-21-12 E	1590-1597	¼M
Peters	1	NEc SE 7-27-9 E	T.D. 2655	Dry
Sitrin	14	NEc SE SW 27-25-9 E	T.D. 2177	Dry

Pittsburgh County

Company	Well No.	Location	Depth	Init. Prod.
Spelter Co.	1	SWc NW NW 21-7-17 E	2438-2640	2M

Pontotoc County

Company	Well No.	Location	Depth	Init. Prod.
Shaffer	4	NWc SW NW NW 16-5-8 E	T.D. 2690	100
Louisiana	5	SWc NE 20-5-8 E	2450-2463	650
Ramsey	4	NWc SW 20-5-8 E	2383-2535	768

Pottawatomie County

Company	Well No.	Location	Depth	Init. Prod.
Tidal	5	SEc NW NW 9-9-5 E	4270-4284	310
Twin State	4	SWc NW SE 19-7-4 E	3755-3844	645

Seminole County

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	2	NWc SW SW 3-9-5 E	4246-4256	64
Independent	5	SEc NE 10-9-5 E	4351-4365	114
Jarvis et al	1	SWc SE SE 6-9-8 E	3245-3272	30
I. T. I. O.	8	NWc NE SW 13-8-6 E	4195-4209	283
Tidal	4	SEc NE NW 13-8-6 E	4364-4380	870
Pine et al	1	NEc SW NE 35-8-6 E	4340-4348	1025
I. T. I. O.	3	SEc SW SE 36-8-6 E	4406-4408	189
Prairie	8	NEc SW SW 10-8-6 E	4337-4354	175
Prairie	5	SEc SW SE 11-8-6 E	4155-4163	310
Amerada	2	SWc NW NE 35-8-6 E	T.D. 4318	Dry
I. T. I. O. et al	1	SEc NE NW 35-8-6 E	T.D. 4368	Dry
I. T. I. O. et al	2	NE SE NW 35-8-6 E	T.D. 4290	Dry
Mid-Continent	4	NEc SW SW 36-8-6 E	T.D. 4280	Dry

Tulsa County

Company	Well No.	Location	Depth	Init. Prod.
Davis	3	CEL SE NW 21-19-12 E	T.D. 1997	Dry
Mallary et al	1	NWc SE NW 28-19-14 E	T.D. 1050	Dry

Wagoner County

Company	Well No.	Location	Depth	Init. Prod.
Chapman	2	NEc SE SE 21-18-17 E	T.D. 922	Dry
McCracken	7	CNL SE NW 21-18-17 E	T.D. 875	Dry
Flesher	1	C NE 18-17-15 E	T.D. 2092	Dry
Crichton	1	NEc NW SW 22-18-17 E	298-305	5

KANSAS

Cowley County

Company	Well No.	Location	Depth	Init. Prod.
Roth et al	1	Lot-1, Blk-26, 22-32-4 E	2525-2535	1M
Roxana	1	NEc 29-30-3 E	T.D. 3102	Dry

Ellsworth County

Company	Well No.	Location	Depth	Init. Prod.
Valerious et al	1	C NW 9-15-10 W	T.D. 3503	Dry

Greenwood County

Company	Well No.	Location	Depth	Init. Prod.
Empire	4	SWc NE NE 25-22-13 E	1676-1725	200
McGinnis et al	5	SEc SW SW 11-23-9 E	2331-2370	39

Seward County

Company	Well No.	Location	Depth	Init. Prod.
Wilson et al	2	SEc NW 3-35-34 W	2702-2735	3M

Sumner County

Company	Well No.	Location	Depth	Init. Prod.
Champlin	2	NEc NW SW 9-30-2 E	2018-2028	4M
Roxana	5	NWc SW 25-31-2 E	1846-1900	10
Derby	1	MVRW	1992-2103	376
Barnsdall	1	NEc NW 23-32-2 E	2038-2094	400
Davis et al	1	SEc 35-31-2 E	T.D. 3690	Dry

(*Continued from Page* 41)

feet. This is 1¾ miles north of the Roxana's famous McCully well, a Wilcox sand producer at 5,987 feet. Several other wells in this play will be completed within the next 30 days.

In the Oklahoma Panhandle operators see a little encouragement in the new showing of the Ramsey Brothers well in Cimarron county, the extreme western county. A year ago this well, in the C NW NE of 27-5N-5E, topped a pay at 4,095 feet. It showed for 35 barrels. It was shot with 30 quarts at that depth without improving it. Then drilling was resumed and a sand at 4670-81 feet yielded a hole full of water. Then it was plugged back to the original showing, given a light squib, and the owners say they believe it will make a 200-barrel well.

Northern Marion county, Kansas, is getting some new work. Four wells in T17S-4E, good for 300 to 350 barrels each, have been the subject of a restrictive agreement under which production was held to 50 barrels each. In the light of new developments, such as the completion of wells in the vicinity, the lid has been lifted and a number of locations made. A sizeable play probably will result. Production is found around 2,400 feet.

Cromwell Drills Deepest Well in Mid-Continent

TULSA, Jan. 12

The Cromwell Oil & Gas Co. No. 1 Thompson, which was drilling last week at 6,747 feet, is the deepest well ever drilled in the Mid-Continent area. The decision to drill this well was reached when the Cromwell Oil & Gas Co. No. 1 Edwards, in the SW NE SE of 10-12n-3w made a 20-barrel producer in a sand encountered at 4383 feet. The No. 1 Edwards, which was completed about a year ago, was not large enough in itself to justify any further drilling to such depths, but it was an indication that oil in commercal quantities existed in the vicinity, and as such, it was sufficient to start the present drilling.

As a deep drilling operation the No. 1 Thompson is interesting. Surface pipe was set July 3, 1927, and with the exception of a little time out for fishing purposes, the drilling has been continuous since that date. The 8-inch casing was set at 4,685 feet on Aug. 3, the hole reduced, and drilling continued with 4-inch drill pipe. No unusual drilling conditions were encountered, and the hole was carried on down to 6,734 feet, using cone bits entirely from the 8-inch casing point. At this depth the pipe twisted off and stuck, but by circulating with oil and using a tap the pipe was recovered and drilling resumed.

All things considered, the hole has gone well, making about 25 feet a day since the hole was reduced and using a fresh set of cones every tour. As to the cost, that has been plenty, running between $125,000 and $150,000 (to date). As the drill pipe travels freely in and out of the hole, and as the casing went in without a hitch, it is believed that the hole is straighter than might be expected of a well of this depth, and that the measurement of 6,747 feet is in a vertical direction. The well is drilling on a 5400-acre block.

From a geological and paleontological standpoint the well is of great interest, as is evidenced by the fact that the representatives of these professions are unable to agree as to the exact nature of the formations through which the bit has passed. It is believed that at present the well is drilling in the Viola lime, encountered at 6,740 feet. The Viola is a member found above the Wilcox sand. Although almost as much time is spent in pumping cuttings to the surface as is spent in drilling, enough definite information has not yet been assembled to identify positively the various markers that have been encountered.

New Field Operations in Oklahoma, Kansas, North, North Central, Panhandle and West Texas, Week Ended January 14, 1928

OKLAHOMA

Beckham County

Company	Well No. Farm	Location
Wright et al	1-Travers	NWc SE SE 30-9-23 W

Carter County

Smith	1-Fee	SWc SE NE 27-2-3 W

Coal County

I. T. I. O.	1-Burris	C NE NW 10-1-11 E

Cotton County

Magnolia	1-With-Ke-Bitty	SWc NE 30-1-9 W

Creek County

Gled	3-Knight	SWc NE NE NW 24-19-8 E
Bu-Vi-Bar	2-Cain	SEc NE 18-17-7 E
Murry	1-Murrell	SWc 8-19-9
Gypsy	8-Aubrey	NEc 24-18-11 OWD
Irelan et al	1-Baker	SWc 11-17-10
Summit Drlg	1-Gilles	NEc SE SW 14-16-11
Madden et al	1-Sellers	NEc SE SW 13-15-9
Wilcox	2-Kimble	NEc SE NW 18-14-10

Grady County

Franklin et al	4-Woods	NWc SE NE 17-3-5 W
Magnolia	3-Dryden	SWc SE SE 35-5-8 W
Okla. Gas Utilities	4-Farwell	NEc SE SW 23-5-8 W
Kay	3-Martin	NWc SW SW 23-27-3 W OWD

Kay County

Marland	1-School Land	SEc 16-25-2 W OWD
Wentz	3-Blackwell	NWc SW SW 20-27-1 W
Otstot et al	1-Lewis	C NW NW 1-27-1 W
O'Shaughnessy et al	1-Attebury	C NW NE 1-27-1 W
Boucher et al	1-Woods	NEc SE 25-27-2 W

Lincoln County

Tex.-Pac	2-Long	NWc SE SE 31-17-5 E
Shaffer	3-Skinner	NEc SW SE 31-17-5 E

Logan County

Davis et al	1-Woods	NEc SE 6-18-4 W
Olean	1-Shepard	SEc SW 7-19-4 W

Muskogee County

Bryan et al	1-Lowery	NWc S½ NW SW 9-15-15 E
Haper et al	1-Stidham	NWc SW SW 9-15-18 E
Rollestone	1-Hixon	C E½ NE 1-13-19 E
Laurel	1-Brown	NWc NE 22-16-12

Osage County

Texas	1	SWc NW 27-27-6
Gypsy	4	SEc NE NW 28-27-6
Gypsy	5	NWc NE NW 28-27-6
Devonian	4	NWc NE NE 33-21-10
Delmar	1	C NE 4-23-10
Beacon	1	NWc SW SE 3-21-11

Pawnee County

Prod-Consolidated	12-George	NWc NE SW 6-20-8 E
Black et al	4-Cotton	CWL SW NE 6-20-8 E

Payne County

Transcontinental	1-Powers	NWc SW NW 10-18-5 E

Seminole County

Louisiana	2-Hulwa	SWc SE SW NE 7-5-8 E
Sinclair	1-Lack	NWc 12-7-6 E
Magnolia	3-Cruse	SEc 2-7-6 E
Magnolia	4-Rhoades	SEc NW SE 12-8-6 E

Stephens County

Magnolia	3-Shaffer	SWc SE SW 29-1-8 W

Texas County

Texas County	1-Barbee Ranch	C NE NE 17-3-15 E

Tulsa County

Texas	1-Strip	SWc NW SE 10-19-10 OWD

KANSAS

Cowley County

Company	Well No. Farm	Location
Small et al	1-Bush	NEc NW SE 3-30-4 E

Marion County

Sutter et al	1-Townsite	SEc 15-17-4 E
Braden et al	1-Smith	NEc 22-17-4 E
Lariaux et al	1-Peterson	SWc NW NW 23-17-4 E
Lariaux et al	2-Peterson	SEc NW NW 23-17-4 E
Lariaux et al	1-School lot	SWc NW NW NW 23-17-4 E
Phillips	1-Peterson	NWc SW NW 23-17-4 E

TEXAS

West Texas and Panhandle

			Survey
Borden County			
Dixon Creek	1-Johnson	Sec-2, 3, 10, 11 Blk-31	T&P
Gray County			
McAuley et al	2-Morse	Sec-3, Blk-26	H&GN
Empire	1-Bender	SEc Sec-164, Blk-3	I&GN
Hutchinson County			
Ward et al	2-Cockrell	SE SW SE Sec-2, Blk-Y	M&C
Motley County			
Matador	1-Bird	SWc NW Sec-r, Blk-S	Stephens
Pecos County			
Humble	4-Smith	Sec-101, Blk-194	TCRR
The California	11-Yates	Sec-34, Blk-194	TCRR
Mid-Kansas et al	10-Smith et al	NWc Sec-33, Blk-194	GC&SF
Mid-Kansas et al	24 Yates	Sec-61, Blk-1	I&GN
Mid-Kansas et al	25-Yates	Sec-61, Blk-1	I&GN
Potter County			
Amarillo	2-Fuqua	C NW Sec-18, Blk-6	BS&F

NOTE: No new locations in Winkler, Crane, Upton, Reagan, Howard etc.—the active counties of West Texas.

NORTH AND NORTH CENTRAL TEXAS

Archer County			
Hines et al	1-Helm	Blk-3	Taylor
Brown County			
Wheelock et al	8-Smith	Blk-3	SA&MG
Gibson	1-Watson	Sec-2, Blk-649	McGee
Ray	1-Alcorn	Blk-623	Cutt
Cranfill et al	1-Hill	Blk-63	Mudgett
Baker	1-Broocks	Blk-645	Padillo
Coleman County			
McChesney	1-Story	Blk-748	Sprague
Gwynup et al	1-Morris	Blk-269	Cochran
Eastland County			
Urban et al	1-Pearson	Sec-10, Blk-1	H&TC
Keudell et al	1-Collins	Sec-3, Blk-2	H&TC
Jack County			
Liedecker et al	5-Hollman	Sec-4	Rice
Security Drlg	7-Cullers	Sec-4	Cullers
Marland et al	1-Cherryhome	Abstract 313	Irwin
Shackleford County			
Engle Bros. et al	1-Mathews	Sec-33	ETRR
Wichita County			
Veigate	2-Watkins	Blk-46	KWVFL
Petroleum Prod	5-Love		Kennard
Wilbarger County			
Texas	1-Kell	Sec-18, Blk-16	H&TC
Young County			
Hinson et al	1-Ragland	Abstract-1361	Akers
White Bros	1-Eddleman	Sec-2693	TE&L
Nash et al	3-Hinson	Abstract-219	Pier
Nash et al	2-Wave	Abstract-188	Manning
Paull	2-Searborough	Abstract-271	Sherrill
Anderson	1-Leberman	Sec-154	TE&L

Test South of Earlsboro Herald's New Pool

(By Telegraph)

TULSA, Jan. 17.—The important test of the Indian Territory Illuminating Oil Co. in 16-8-5 south of the Earlsboro pool has hole full of oil from the Simpson formation, with the Wilcox not yet reached, at 4283 feet. The well has made several flows and looks certain to produce from the Wilcox in which case another major pool in the Seminole District probably is in sight. It is three miles southwest of the large well of the Barnsdall in Sec. 14 of the same township.

After getting a severe setback in the form of a failure in the Wilcox near the discovery well, Logan County is taking on a better appearance. The Roxana Petroleum Corp. No. 1 Ross in the northwest corner of 29-19-4 west made 730 barrels from total depth of 6,050 feet with the Wilcox presumably just scratched. This well is one-fourth mile east and three-fourths north of the same company's discovery in the Wilcox which came in last June. Roxana's No. 1 Williams in Sec. 32 now has total depth of 6100 feet and has hole full of oil. The Wilcox probably has not been tapped in this well. It is a south offset to the Wilcox failure and is about a quarter mile southeast of the discovery. The west offset to the Williams well being drilled by Wentz Oil Corp. has total depth of 6220 feet and has 1600 feet of oil in hole. It probably is producing from the Simpson which also is making some oil in the Roxana's Wilcox failure in the same locality.

White Eagle-Independent Merger Deal Dropped

TULSA, Jan. 14.—Official statement was made yesterday that the proposed merger of the Independent Oil & Gas Co. and the White Eagle Oil & Refining Co. had been dropped. The wind-up came with the conference Jan. 13 of L. L. Marcell, president of White Eagle, and executives of the Independent, including Waite Phillips, chairman of the board.

The proposed merger was one that had long been rumored and shortly after Christmas it reached the stage of a check of each other's records. Proposals and counter proposals were made without common ground being reached. Executives of the interested companies say there is no likelihood of resumption of negotiations.

Cheap Oklahoma Crude Booms Stocks Of Standard Pipe Lines

By Roger B. Stafford
N. P. N. STAFF WRITER

Staff Special
CLEVELAND, Jan. 16

STOCKS of pipe line companies and a few Standard and Independent complete companies made excellent price advances in 1927 in the New York Curb market.

Two of the largest gains were made by two specialty companies of the Standard group, the Vacuum Oil Co. and the Chesebrough Mfg. Co. The former rose more than 50 points from its low in January to its high for the year in November, and its closing price was 44½ points higher than the closing price in 1925. Chesebrough rose from a low of 76½ in June to a high of 126 in October and its close at 119⅞ was a gain of 41⅞ points for the year.

But as a class the pipe line companies that transported Mid-Continent crude made large gains, two of them, the Prairie and the Illinois, being of extraordinary size. Prairie advanced 54 points and Illinois 46¾. Buckeye Pipe Line gained 11¼, Indiana 12, Northern 23, South West Pennsylvania 18½, National Transit 7¼, and New York Transit 6¼. Eureka gained only 2 points. Cumberland lost 12¼ points and Southern 3⅜.

The pipe line companies that gained 5 or more points all transported some Mid-Continent crude. The cheapness of Mid-Continent crude because of the Seminole overproduction, resulted in more of it being used at eastern refineries.

The Cumberland gathers and distributes crude only in Kentucky. The Eureka, which made a small gain, functions the same way in West Virginia, receiving some Kentucky oil from the Cumberland. The Southern is a connecting link between the Eureka and the Philadelphia district plants, and consequently has been transporting relatively small amount of crude east.

Standard of Indiana, whose stock is second in activity among the Standards only to the stock of the Standard of New Jersey on the New York stock exchange, advanced a net of 10 points. The Canadian subsidiary of the Standard of New Jersey, Imperial Oil, Ltd., gained 21⅝ points. Imperial's subsidiary, the International Petroleum Co., closed the year at 37, a gain of 4¾ points.

The solely refining companies, Solar Refining Co. and Standard Oil of Kansas lost 16 and 4⅝, respectively. The Standard of Kansas has not paid a dividend for three and a half years and its $25 stock closed 1927 at 14⅞. The Standard of Nebraska, strictly a marketing company, lost 5½ points. A gain of 2¾ points was made by the Standard of Kentucky which is primarily a marketing company although

Ranges of Prices of Independent Oil Stocks on New York Curb in 1927

Stocks	Sales	High	Month	Low	Month	Last	Ch'ge over Year
Amer. Con. Oilfields..	2,930,800	2⅛	Jan.	.55	Aug.	1	— ⅜
Amer. Maracaibo....	484,300	7½	Jan.	2¾	June	3½	— 3⅜
Arkansas Nat. Gas...	125,100	9¾	July	6¾	Apr.	8¾	+ 1
British American....	3,500	40	Dec.	20½	Jan.	38½	+17
Carib Synd. (new)...	245,800	26	Jan.	14⅜	May	18⅞	....
do ctf. of deposit.	21,900	26	....	15⅛	....	15⅛	....
Cities Service.....	1,966,550	58¾	Dec.	40¼	Mar.	55¾	+ 5
do pfd.....	203,350	95⅜	Dec.	87	Mar.	94⅜	+ 3
do pfd. B.....	29,100	87⅜	Dec.	73⅛	May	87⅜	+ ⅝
do bankers.....	5,700	29¼	Mar.	22½	July	25⅝	+ ⅜
Colombia Synd.....	1,418,800	3⅞	Jan.	1⅛	Dec.	2	— ½
Consol. Royalty.....	10,700	9¾	Mar.	6⅜	Dec.	7	— 2
Creole Synd.....	1,813,600	14⅞	Jan.	9½	June	10⅜	— 3⅜
Crown Central.....	80,800	3	Jan.	.50	Dec.	.80	— 2⅜
Darby Pet.....	42,600	12	Mar.	4	Jan.	7¾	+ 2⅞
do trust ctf.....	31,400	11½	Mar.	4	Jan.	8	....
Derby Oil & Ref.....	17,425	2½	May	.74	Dec.	1	— 1½
do pfd.....	7,975	16¾	May	4	Dec.	8½	— 4½
Gibson Oil.....	733,200	3¾	Jan.	1	Sept.	1¾	— 1⅜
Gilliland Ctfs.....	46,800	2	Mar.	.40	Oct.	.55	— ⅝
Gulf Oil Corp.....	939,500	118	Dec.	86¼	Apr.	116	+19¼
Kirby Petroleum.....	53,000	2¼	Jan.	1⅛	Oct.	1½	+ ⅛
Leonard Oil & Dev...	3,413,300	10⅞	Feb.	5⅛	Nov.	6¼	+ ¾
Lion Oil & Ref.....	87,100	27½	Feb.	20	Oct.	20½	— 4⅜
Margay Oil.....	43,700	52	Sept.	12	Jan.	45½	+32½
Magdalena Synd.....	442,800	2⅞	Jan.	.80	Sept.	1⅝	— 1¾
Mexican Panuco.....	85,700	3	Feb.	1¼	Aug.	2⅛	— ⅞
Mountain & Gulf....	22,700	1½	Apr.	1	July	1⅜	0
Mountain Producers.	311,600	29¼	Dec.	22¾	Apr.	28⅜	+ 3½
New Bradford.....	56,100	5⅞	Jan.	4⅝	Oct.	5⅜	+ ⅛
New England Fuel...	5,500	6¼	Mar.	4	Apr.	4½	— 1¾
New Mex. & Ariz....	200,500	16	June	9¼	Apr.	9½	— 3½
New York Oil.....	59,000	13⅞	Dec.	9	Mar.	13½	+ 3⅛
North Cent. Texas...	35,700	12¾	Mar.	9½	Nov.	10¾	— ⅝
Okla. Nat. Gas ctfs...	2,300	23⅞	May	21¾	Feb.	21⅝	+ ⅝
Pandem Oil.....	363,900	9⅜	Apr.	3¼	Sept.	4½	— 2
Pantepec Oil.....	297,400	12⅛	Mar.	7	Sept.	9	— 3
Peer Oil.....	8,000	.37	....	.25	....	26	— .04
Pennok Oil.....	21,400	13½	Jan.	5⅛	Dec.	5⅝	— 8⅜
Red Bank Oil.....	14,800	24⅜	Jan.	7	Dec.	15½	— 7
Reiter-Foster.....	239,700	15½	Jan.	3½	Sept.	5	— 9¾
Richfield Oil.....	46,800	28⅜	....	15	....	27⅞	+ 4⅞
Ryan Consol.....	47,900	7	Jan.	4½	Dec.	5	0
Salt Creek Cons.....	43,400	8	Jan.	5¼	May	7	— ⅞
Salt Creek Prod.....	318,000	35½	Dec.	27¼	Apr.	34⅜	+ 3⅜
Savoy Oil.....	17,400	7	Feb.	1¾	Dec.	1¼	— 3⅜
Tidal Osage.....	131,800	26½	Feb.	17	Apr.	20⅜	— 1⅛
do non-voting....	258,600	23¾	Mar.	15	Apr.	17¾	— 3¼
Transcontinental pfd.	27,325	92	Dec.	63½	Apr.	82	....
Venezuelan Pet.....	255,900	7⅜	Feb.	4¼	June	4⅞	— 2¼
Wilcox Oil & Gas....	143,000	32⅝	Jan.	19½	Dec.	21	—7⅜
Woodley Pet.....	30,800	8	Jan.	4¾	Nov.	6	— 1½

Ranges of Prices of Standard Oil Stocks on New York Curb in 1927

Stocks	Sales	High	Month	Low	Month	Last	Ch'ge over Year
Anglo American.....	74,600	21⅝	Feb.	17⅞	Mar.	18¼	— ¼
do ctfs., non-voting	24,700	21½	May	17⅝	Feb.	19	— ¾
Atlantic Lobos.....	26,900	3¾	Nov.	.75	May	1⅞	+ ⅜
do pfd.....	7,200	6½	Nov.	2½	June	3½	+ ¼
Borne Scrymser.....	7,550	69	Feb.	50	Apr.	59	— 9
Buckeye Pipeline....	34,440	60	Nov.	45	Jan.	57	+11¼
Chesebrough Mfg....	19,300	126	Oct.	76½	June	119⅞	+41⅞
Continental Oil.....	200,300	22⅝	Jan.	16¼	Oct.	21¼	+ 1
Cumberland P. L....	7,100	137	Jan.	89	Mar.	92¾	—12¼
Eureka Pipeline.....	600	16	Dec.	14	Jan.	16	+ 2
Galena Signal.....	23,410	13½	Feb.	3½	Dec.	4	— 6
do new pfd.....	2,870	59¾	Jan.	23	Dec.	25	—15
do old pfd.....	3,790	60⅛	Jan.	35½	July	35½	—24½
Humble Oil & Refg...	742,400	68½	Nov.	54	Apr.	67½	+ 6⅜
Illinois Pipe Line....	59,470	182	Nov.	123¾	Jan.	174	+46¾
Imperial Canada.....	580,300	64¾	Sept.	37¾	Jan.	59½	+21⅝
Indiana Pipe Line....	43,790	94½	Nov.	61	Jan.	76	+12
International Pet.....	1,136,500	39	Oct.	28¼	June	37	+ 4¾
National Transit.....	125,100	24	Nov.	13¼	Mar.	20⅞	+ 7¼
New York Transit...	9,140	44½	Nov.	31¼	Jan.	37½	+ 6¼
Northern P. L.....	11,350	100	Oct.	70	Jan.	93	+23
Ohio Oil Co.....	269,500	67⅞	Nov.	52	Apr.	65⅞	+ 5¼
Penn Mex. Fuel.....	62,100	39	Dec.	12	Apr.	38	+20
Prairie Oil & Gas....	496,500	55½	Jan.	45⅝	Apr.	49	— 4⅛
Prairie P. L.....	164,950	190	Nov.	132	Jan.	186½	+54
Solar Refining.....	4,995	201½	Feb.	175½	Nov.	178	—16
Southern P. L.....	14,000	27¼	Feb.	15½	Mar.	20½	— 3⅜
South Penn Oil.....	38,900	41½	Jan.	35	Apr.	38	— ⅝
S. W. Pa. Pipe Lines.	6,650	83	Nov.	55½	Jan.	73	+18½
S. O. Indiana.....	2,116,300	81½	Nov.	64⅝	May	78⅜	+10
S. O. Kansas.....	64,200	20⅞	Jan.	14⅝	Dec.	14⅞	— 4⅝
S. O. Kentucky.....	90,300	130	Nov.	111½	July	124¼	+ 2¾
S. O. Nebraska.....	26,600	49½	Feb.	40	June	42	— 5½
S. O. Ohio (new).....	27,800	87½	Mar.	72	Apr.	79	....
do pfd.....	2,280	122	Nov.	117¼	Jan.	120¼	+ 2¼
Swan-Finch Oil.....	6,850	21	Oct.	14½	Apr.	17½	+ 1½
Vacuum Oil.....	812,100	149⅞	Nov.	95⅛	Jan.	140½	+44½

it has a refinery at Louisville which supplies only a small part of its merchandise requirements, lifts it from the exclusively marketing class.

Prairie Oil & Gas Co. stock which it was expected would feel the effects of Seminole overproduction of crude more directly than any other Standard company, receded only 4⅛ points. Prairie ranged less than 10 points all year. It reached a high of 55½ in January and fell to a low of 45⅝ in April. Its close Dec. 31 was 49.

The most notable gain among the Independents on the Curb market was the Margay Oil Co., which operates in the Mid-Continent. Margay rose from low of 12 in January to a high of 52 in September and closed the year at 45⅛, a gain of 32½ points.

Gulf Oil stock rose 19¼ points. This was the largest advance made by any company of near the size of the Gulf and whose stocks are marketed on the two New York exchanges. Stock of British-American Oil Co., Ltd., a Canadian marketing and refining company which also has some western Canadian acreage, rose 17 points.

Cities Service issues, which reflect a large volume of public utilities income, all gained, the common netting 5 points over the year. Gains were made by Rocky Mountain stocks such at Salt Creek Producers Association, Mountain Producers Association and New Bradford Oil Co. Salt Creek Consolidated suffered a fractional loss.

Stocks of most Mid-Continent producing companies fell. Stocks of Mexican and South American operators also lost ground.

Northern Pipe Line Co.—Fight over disposition of $3,600,000 cash assets is expected at stockholders' annual meeting Jan. 19. A stockholders' protective committee claims to have proxies to elect two of the five directors. This committee in a letter charged company's statement did not show the real condition of the company. The directors issued a letter saying that since 1912 it had paid an average of $417,000 in dividends, or at rate of 10½ per cent a year. It also said a wholesale distribution of capital at this time would be unwise.

TITUSVILLE, Pa., Jan. 17.—The next meetings of the Society for the Development of Internal Combustion Power will be held in the Hollenden Hotel, Cleveland, O., Feb. 2 and 3, according to announcement of Harry Botsford. Mr. Botsford says the meeting promises to be a very interesting one and a large attendance is expected of manufacturers of slow speed, heavy duty engines as well as manufacturers of multiple cylinder high speed and diesel engines. Manufacturers planning to attend should notify the Titusville office of the society, Mr. Botsford states.

Three Wells Doing 1500 Barrels In New Rincon Field

Staff Special

LOS ANGELES, Jan. 15

RINCON, the new oil field in Ventura county, some six miles up the coast from the city of Ventura, had three wells on production at the close of the week, with daily average production about 1,500 barrels. Gravity of the oil is about 30 A.P.I. with about 500,000 cubic feet of gas from each well. The first well on regular production is producing gas with a natural gasoline content of three gallons to the cubic feet.

Chanslor-Canfield-Midway Oil Co.'s Hobson No. 1 C and No. 2 C were completed Jan. 12 for 1,000 barrels for both wells, and each well is producing from only 22 feet of sand, with bottom of holes at about 2,625 feet. These wells are near the water front not far from the Pan American well, which has been on production for two weeks from approximately the same depth. This company has three other wells drilling in the same vicinity. At close of this week there were eight wells either drilling in the oil sand or standing cemented preparatory to production tests. There are 22 drilling wells and rigs in this new field, and some three to four wells at least should be on production the coming week.

The General Petroleum Corp. handles the production from the Chanslor-Canfield-Midway wells, and work was started this week laying an eight-inch welded pipe line from Rincon to Ventura and the oil will be loaded on tankers through the Associated Oil Co.'s deep sea loading facilities. This line is expected to be completed in three weeks.

Three wells are drilling on the Southern Pacific right of way through the middle of the field, the drilling being done by the Standard of California for the S. P. Land Co.

Another development this week was the decision of the Chanslor-Canfield-Midway to abandon the well up on the hill overlooking the present field. This well was the actual discovery hole for the field, and had reached 7,002 feet. This company's second venture in this area, which also found plenty of oil sand up in the hills, is still being recemented and worked over in an effort to shut off the water. This hole also had plenty of gas pressure and reached 5,738 feet. They are now trying to plug at 5,440 feet.

Two wells were placed on production in the Ventura Avenue field the past week, adding nearly 5,000 barrels of flush production. Petroleum Securities Co.'s Willett 2 was brought in for 1,950 barrels of 31 gravity oil at 6,615 feet. It is making 3,500,000 cubic feet of gas. Shell Co.'s Edison 18 was also completed for 2,950 barrels of 30 gravity oil at 7,015 feet, giving the Shell Co. the deepest producer in the field. This well is producing from 1,925 feet of pay formation and has a tubing pressure of 250 pounds and a casing pressure of 1,000 pounds.

During the past eight days, just three wells have been completed in the deep sand at Long Beach adding close to 7,000 barrels of new production. In spite of this, the field is hardly holding its own. Hichfield Oil Co. this week completed a well for 3,500 barrels in the deep sand, and previously two other wells making considerably less oil were finished. All of the new wells are around 6,000 feet deep. At present the drilling wells, rigs and locations number close to 150. Thirty-five strings of tools are running for two major companies, but a number of smaller operators are also busy on small tracts.

Considerable attention was attracted this week to the old Tiber field in San Luis Obispo county, some 8 miles south of the town of Edna, when reports reached Los Angeles that the Alberta-Midway Oil Co.'s test was a 1,000 barrel well at 3,154 feet. The report proved to be in error as to the production as the well early in the week was averaging about 200 barrels a day of 13 gravity oil. The well is on the pump and there is 144 feet of perforated pipe at the bottom. It was tubed to 1,800 feet.

The Tiber field is old and what little production there is comes from a shallow depth. During the past ten years several wells have been drilled in the field to comparatively deep points, but without any success. Five major California companies hold acreage in the general vicinity of the new well, but none are showing any speed in making locations. Due to the gravity of the oil and small production, there is little incentive to drill.

Seal Beach passed the week without a completion, but it is expected that several will be in the production column next week. Also considerable interest is being shown in two tests drilling by the Marland, which are reported to have penetrated an oil sand below the Wasem.

OMAHA, Jan. 16.—The Superior Oil Co., Superior, Neb., was sold recently by S. J. Swanson, the founder, to Dr. M. A. Latham of Superior. The company will operate under the same name with W. E. McKeowen as manager.

Sub-Committees Are Appointed For New Producing Division

NEW YORK, Jan. 14

FURTHER developments in the organization of the Division of Production Engineering of the American Petroleum Institute, launched at the recent A.P.I. meeting at Chicago, are the appointment of sub-committees to handle the work of the new division on various subjects having to do with oil field engineering.

Direction of activities of the division rests with the directors of the institute, with immediate supervision in the hands of a general committee on production engineering, to be composed of national officers of the division and district chairmen. National officers are John R. Suman, Humble Oil & Refining Co., Houston, chairman; T. E. Swigart, Shell Co. of California, vice-chairman; Carl Young, of the institute staff, acting secretary. Mr. Young takes over these new duties in addition to continuing to direct the institute standardization of oil field equipment program.

The sub-committee on publications consists of Mr. Swigart, chairman; Fred E. Wood, Midwest Refining Co., and C. V. Milliken, Amerada Petroleum Co. Its purpose is to review and accept material for publication.

Mr. Swigart is also chairman of the program committee.

Max W. Ball, Argo Oil Co., Denver, is chairman of the sub-committee on by-laws and plan of procedure. Other members are Wallace E. Pratt, Humble Oil & Refining Co., and Clark C. Gester, Standard Oil Co. of California.

A. C. Rubel, Union Oil Co. of California, is chairman of the sub-committee on standards of development and production records and nomenclature.

Earl Oliver, of Earl Oliver & Co., Ponca City, is chairman of the sub-committee on compilation and correlation of regional reports of the technical sub-committee of the A.P.I. committee on gas conservation.

Dr. W. P. Haseman, Marland Oil Co., Ponca City, is chairman of the sub-committee on development of research in production engineering problems.

Harold W. Fletcher, Hughes Tool Co., Houston, is chairman of the sub-committee on metallurgy of oil field equipment.

Frank O. Prior, Midwest Refining Co., Casper, is chairman of the sub-committee on electrification of oil field equipment.

C. E. Beecher, Empire Gas & Fuel Co., Bartlesville, Okla., is chairman of the sub-committee on production technique.

H. H. Anderson, Shell Co. of California, is chairman of the sub-committee on drilling technique.

Response to the sending out by the institute of applications for membership in the new division, has been greater than anticipated, according to Assistant Secretary W. R. Boyd, Jr., of the institute staff. Membership is open to properly qualified institute members upon payment of $2.50 annual dues additional.

Navy Wants Teapot Dome Drainage Compensation

TULSA, Jan. 14.—Plans of the navy department for the handling of the Teapot Dome naval reserve, which has formally been handed back to the navy together with all equipment, appurtenances and gadgets thereunto appertaining, are quite simple. Press dispatches from Casper, where Admiral H. H. Rousseau has been visiting, say that all the wells will be shut in. The admiral has charge of the petroleum reserves for the navy. He is quoted as follows:

"The Teapot Dome will be handled in the future altogether as a naval reserve property. Production has been discontinued and the department plans no development. Possible drainage of the dome will be taken care of through compensatory royalty agreements, advocated by the navy department as a means of receiving equitable returns for the government's share of oil produced in wells offsetting the navy reserve. Agreements of this kind are in effect on the Elk Hills reserve and are satisfactory."

The admiral did not mention any companies who will pay offset royalties. They are few offsetting companies and all of them operate on the Salt Creek side of the boundary. The Tulsa office of NATIONAL PETROLEUM NEWS wired Max W. Ball, president of the Argo Oil Co., Denver, whose company operates Salt Creek offset wells. This reply was received:

"We have consistently replied to navy department that we see no reason why we should pay royalties to navy because navy shuts down Teapot reserve. We have nine of the eleven wells offsetting the reserve."

It would appear that the navy spoke slightly out of turn. It is well known, of course, that the courts have decided that there is no drainage of Teapot by Salt Creek wells. In view of that pronouncement, no Teapot oil would venture to cross the boundary. The navy has publicly affirmed that view but just in case there might be some drainage, royalties are desired.

As some of the starving wells on the Salt Creek side will hardly pay operating expenses now, the view of the owners seems to be, "Try and Get It."

Shaffer Oil & Refining Tests "Kant-Nock"

Staff Special

CHICAGO, Jan. 14.—Shaffer Oil & Refining Co. has just completed a series of laboratory and practical tests of their new product "Kant-Nock" which employed seven technical men for four months and cost the the company between $15,000 and $20,000. Engineers assigned to the work by automobile manufacturers, helped in the road tests particularly.

Atmospheric and motor temperatures were recorded accurately. Barometric conditions, air pressures, carbureter settings, speeds, loads and many other elements entered into the computations. To increase knocking, the cars with which the experiments were made were put to towing duty in front of heavy loads. Every test was made in hilly country and repeated in flat country. Company officials believe they have data on the most elaborate test of its kind ever carried out.

The literature going out to the trade as a result of the experiments places special emphasis on the fact that laboratory tests of gasoline have been definitely lifted from the realm of speculation and reconciled perfectly with practical experiments on the road under varying conditions with several kinds of motors. Company executives say their aim has been to achieve anti-detonating qualities in the new product to the maximum degree consistent with necessary power and volatility, recognizing that it is scientifically possible to sacrifice one quality for another in the process of manufacture.

Kant-Nock is advertised as a product with a 350 end point. Whatever such a product may lose (if anything) in miles per gallon on a sustained run, it makes up in the number of starts per gallon in actual interrupted operation, the sales department maintains. They admit that the product is made at a considerable sacrifice in yield from the crude but refuse to say how much the cost is increased thereby.

The sales department boasts that the sales of Kant-Nock to re-sellers during November was three times the sale of the company's U. S. Motor specification product. This they consider remarkable in view of the fact that Kant-Nock has been available in quantity only about four months.

Give Quart of Oil With Sale Of 5 Gallons of Gas

CHICAGO, Jan. 16

SOME dealers and individual station owners, in Standard Oil Co. of Indiana territory, to increase gasoline sales in order to get a bigger discount under the Q.D.A. schedule, are giving away motor oil. The practice results in loss of that portion of net profit which comes from motor oil sales; but if the result is a large enough volume of gasoline sold the dealer obtains a bigger discount in his purchases of this product.

To the motorist, a quart of oil free with every purchase of five gallons of gasoline, seems to be a gift of 25 cents on the oil, or 5-cents on the gallon of gasoline. The "free oil" offer keeps the posted price on an even keel, but attracts customers who seem to be getting a 5-cent a gallon reduction. In reality this seeming 25-cent gift of oil is covered by the dealer for a nickel.

How this "free oil" offer as a means of increasing gasoline discount works is seen in a station operated by W. R. Nelson, a Standard Oil Co. customer, at 6001 N. Western ave., Chicago. When the motoring season of 1927 was beginning Mr. Nelson was selling upwards of 10,000 gallons of gasoline a month which meant he was enjoying a gross spread of 5 cents a gallon, and he was selling at the posted price. He was making something on his oil sales then but not as much net profit on the station as he would like to have.

About the time the weather got warm, a sign offering a quart of Polarine with each five gallon gasoline purchase appeared above the filling station. Gallonage doubled shortly and continued at the increased rate all summer. The station still is giving a quart of Polarine motor oil with every 5-gallon purchase of gasoline.

How can they afford to do it? That is the question all competitors in the neighborhood wanted answered. Often as many as 50 full drums of motor oil were stacked up on the station lot and one of the attendants rigged up a system of emptying them into the station tanks rapidly by charging them with compressed air. They frequently gave away as much as 100 gallons of Polarine a day.

Giving a quart with a five gallon purchase is an actual price concession of 2 cents a gallon on the part of the station. But a price reduction of 2 cents a gallon would not be nearly so attractive to the average motorist as what looks like a 5 cent reduction through giving motor oil away. Polarine retails regularly at 25 cents a quart and, to the customer, a quart of it is "two bits" worth of merchandise, or a reduction of 5 cents a gallon on gasoline. In car load lots ordering 60 drums at a time, Polarine is 40 cents a gallon, which reduces to 10 cents a quart.

The station no longer sought to make a profit on oil. It became part of the station's free service like air and water. As far as the station is concerned now this is a price concession of 10 cents a customer, but it is not 2 cents a gallon because the Q.D.A. makes up the difference.

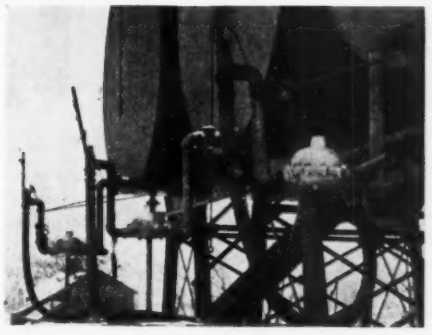
By giving away motor oil the station's gallonage moved from the 10,000 to the 15,000-gallon class—from the 5-cent bracket into the 6-cent bracket of the Q.D.A. Mr. Nelson's contribution is only 5 cents a customer, or approximately 1 cent a gallon. Thus he has done what amounts to doubling his volume on a 1-cent price concession to the trade.

Actually this dealer gets 90 cents from the customer in return for 5 gallons of Red Crown gasoline and a quart of Polarine motor oil. The oil represents a cash outlay of 10 cents, but he considers it free service, so he really is getting the equivalent of 80 cents for five gallons of gasoline that cost him 60 cents—6 cents under the retail price of 18 cents a gallon. A gross spread of 33 1/3 per cent.

THE advantages of a large volume over a large margin are probably more pronounced in Chicago than in smaller cities. Here filling station employees draw high wages, dictated by a powerful labor organization; ground rentals are high; taxes are numerous and political "racketeers" are omnipresent. In short, overhead is a big item and it is fairly constant. If a dealer has space in which to store and handle other merchandise he usually can figure that his employees have considerable idle time. The uppermost question is how to use time and space to the best advantage, rent and pay roll being the same.

Mr. Nelson handles three brands of motor oil that sell for 30 cents a quart as a rule. He extends the free service to them as well as to Polarine, but the customer must buy more gasoline. The purchaser of 10 gallons of gasoline may have a free quart of Mobiloil, Penzoil or Iso-vis. If a customer does not want motor oil when he buys his gasoline he may take a check for it and get it later. If he gets enough of these checks together he can spend them all at once and get his crank case filled free.

NIAGARA METER TRAVELS



No. 1
Buffalo, N.Y.

THIS being the first of a series of advertisements featuring Niagara Oil Meter installations throughout the country, we take this occasion to show a typical installation at the tank-truck loading station of the Hygrade Oil and Fuel Corporation in Buffalo, New York, the city in which Niagara Oil Meters are manufactured.

This company is using three meters of the 2½ inch G size for measuring truck fillings. The tanks are well elevated, thus allowing a flow of 65 to 75 gallons per minute with gravity pressure. Since installing Niagara Oil Meters on their storage tanks the Hygrade Oil Company has been able to maintain an *accurate* daily check on all truck fillings.

Measure by Meter for Accuracy!

Among the hundred or more uses of Niagara Oil Meters, probably the most outstanding are the uses to which these meters are put by petroleum marketers. Progressive dealers and wholesalers everywhere are using them for measuring storage tank fillings and tank-truck loadings. Tank car fillings and deliveries are accurately checked; drum fillings measured and totaled; gasoline is measured from one tank to another . . . all automatically, without fire hazard and without loss of time.

Whatever your requirements may be, there is a type of Niagara Oil Meter that will meet them. Write today for full information. Buffalo Meter Company, 2889 Main Street, Buffalo, N. Y.

Niagara Oil Meters

The coupon will bring you a free copy of this booklet.

Buffalo Meter Co., 2889 Main St., Buffalo, N. Y.

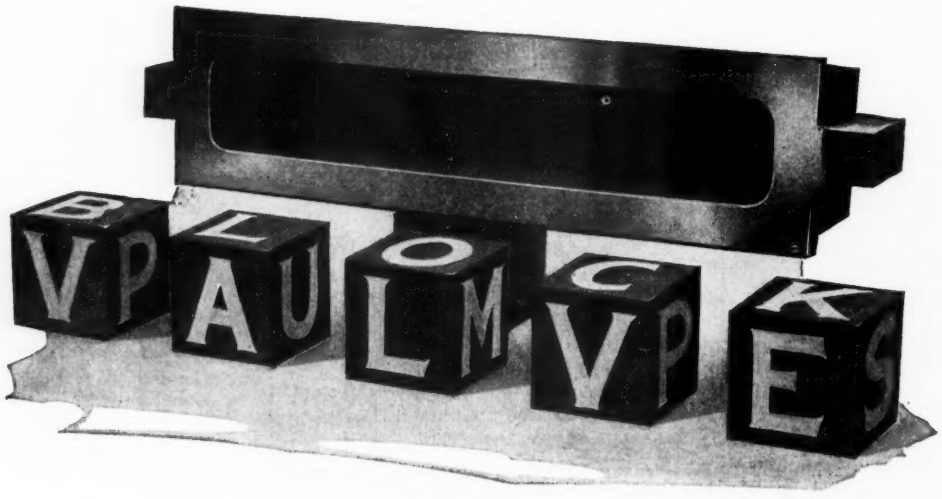
Please send us a *free* copy of your Niagara Oil Meter booklet.

Name.....

Type of Business.....

Address.....

TRANSIT
Block Valve Pumps



REFINERY men who have hot tar or residuum to handle will be interested in the design of the Block Valve illustrated above. It was photographed lying on its side in order to show the ground face which fits on its seat in the valve chamber.

At each end of the valve is a machined lug which works in a guide formed in the valve chamber cover. This keeps each valve in place directly over its seat. The valve is a box casting open at the top and so designed that distortion from any cause is practically eliminated.

This is just one of the points that make TRANSIT Block Valve Pumps so popular in the refining industry for handling the very hottest or thickest semi-fluids.

Full description and blue prints on request.

Representatives

FRICK-REID SUPPLY COMPANY
Tulsa, Okla., or any store.

ASSOCIATED SUPPLY COMPANY
Los Angeles, San Francisco, Bakersfield, Fellows

E. L. WILSON HARDWARE CO.
Beaumont, Texas.

NATIONAL TRANSIT
Pump & Machine Co.
Oil City, Pa.

DISTRICT OFFICES

NEW YORK · PHILADELPHIA · PITTSBURGH
CLEVELAND · HOUSTON · TULSA · DENVER

Representatives

THE GLOBE SUPPLY & MACHINERY CO.
New Orleans, La.

F. C. RICHMOND MACHINERY CO.
Salt Lake City, Utah.

MORTON McL. DUKEHART & CO.
Baltimore, Md.

REEVES & SKINNER MACHINERY CO.
St. Louis, Mo.

Schuchow & Gavrilow Held Not to Cover Later Tube Cracking Processes

By Paul Truesdell
N. P. N. STAFF WRITER

AMONG the early day patents bearing upon the cracking of oil by circulating it through some form of pipe still under pressure, that issued to two Russians, Schuchow and Gavrilow, being Russian patent No. 4,782 of 1891, is probably the most cited. It occupies about the same position in the tube cracking art that the Dewar and Redwood patent held in the bulk pressure distillation art.

The patent examiner in charge of oil cracking patents once told the writer that he considered that the Schuchow and Gavrilow patent covered the patent issued to Carleton Ellis, which is one of those upon which the Tube and Tank process of the Standard of New Jersey is founded.

The Russian patent has been informally held by many interested in cracking patent litigation to have a considerable bearing on the Cross process as well as the Tube and Tank and to show a surprising knowledge, considering the date of issue, of the principles of pressure distillation in pipe stills.

Special Master Charles Martindale, in United States of America versus Standard of Indiana and others, finds that the Schuchow and Gavrilow patent bears no important relation to any of the patents owned by members of the Patent Club and attacked by the government in the suit.

IN PREVIOUS issues of NATIONAL PETROLEUM NEWS have been discussed various phases of the master's report. In the Jan. 4 issue, the discussion by the master of the prior art relating to bulk pressure distillation was published (page 22).

In the accompanying article, what the master had to say regarding the principal tube still cracking patents cited by the government as anticipating the patents in suit is published. Here is the master's opinion of the Schuchow and Gavrilow patent:

"It is an apparatus patent for the continuous fractional distillation of petroleum and other liquids and also for the recovery of gas from petroleum and its product."

"The inventor discloses condensation by mixing his products with cold water instead of the ordinary method of sending the product through pipes cooled by water. But this is non-essential to the purposes of the disclosure in this case.

"The patent reveals nothing as to the amount of pressure nor as to the degree of heat. It mentions kerosene as the product.

"The patent refers to either distillation in the hot coil or decomposition.

"As the process is for the production of kerosene, the natural inference would be that it was intended to produce only light cracking to convert some of the next heavier product into kerosene which is the wanted product.

"Nowhere is gasoline referred to and at the date of the invention it was a waste product in the manufacture of kerosene and therefore it cannot be presumed that the inventors wanted to make gasoline.

"Because he has found this old tube still in the art and because the language of the description of what takes place in the operation is not stated, the government's expert (Dr. R. H. McKee) has felt free to exercise his imagination upon this disclosure and convert it into equivalency of certain operations of some of the patents herein attacked by the petitioner (the government).

"IT IS cited against all of the Adams patents; the Ellis process patent, No. 1,415,234; the Hall process patent, No. 1,175,909; Humphreys patent (runback) No. 1,119,700 and the Manley patent No. 1,428,338. It was cited in the patent office against Adams and there distinguished.

"Without a tedious resumé of the processes of Adams, Ellis, Hall, Humphreys and Manley, it can certainly be said that the respective inventions of above mentioned patents are neither disclosed nor hinted at by Schuchow and Gavrilow.

"The reference would not be accepted as clearly disclosing the high pressures and temperatures of some of the patents here in question.

"There was a contention raised by the petitioner that there is a liquid body in the Schuchow tank or drum. Such a contention is refuted by the plain showing of the patent that the object is to drain out of that tank as rapidly as the same are separated, any liquids which have not been vaporized by the coils."

THE rerunning of the heavy liquids coming from the tank does not affect any of the patents here in suit.

"The disclosure is uncertain in its terms and whatever is certain about the apparatus and the operation is so remote from the inventions of the patents of defendants that it is not worthy of the discussion which has been devoted to it in the record."

The master then goes on to discuss other cited tube cracking patents, giving most of them but a few words. The Benton patent, another generally held to be important in the prior art, is considered at considerable length as follows:

"Benton, U. S. Patent No. 342,564 of 1886 is a 'process of refining crude petroleum' for the purpose of making illuminating oil. He says that the benzine in crude petroleum 'in some cases reaches as high as 12 per cent so that it occasions a serious loss of the raw material to have the benzine unavailable for illuminating purposes'.

"His purpose, therefore, is to hold the benzine in the illuminating oil cut.

Utility Considered Next Week

THREE more important parts of the report of the special master in United States of America versus Standard of Indiana and Others, remain to be published. These are utility, bearing on whether or not the patents owned by the members of the Patent Club and attacked by the Government cover useful inventions without which the nation's need for gasoline could not have been met; the charges of fraud in the allowance of the Adams patents and the charge of the suppression of the Fleming cracking process.

What the special master had to say about the utility of the patents, which is one of the chief factors in establishing the soundness of any patent, will be published next week.

GREASE COMPOUNDING MADE EASY!

A new book "GREASE COMPOUNDING MADE EASY" by Forrest A. Hoff is just out. Contains 100 certified grease formulas, with full instructions as to their manufacture and uses.

Explains the only two methods of making Cup Greases and gives Formulas for: Brick greases, Fibre greases (8 grades); Transmission grease; Cup grease (8 grades); Double decomposition grease; Ford non-chatter base; Heavy auto oil; Medium auto oil; Light auto oil. All Formulas figured in one-barrel batches.

A laboratory analysis of only one grease sample costs $25.00. In GREASE COMPOUNDING MADE EASY you get 100 certified grease formulas for $25. This includes instructions how to make them, so simple that any one having steam and a kettle and following directions carefully, will have good success in manufacturing greases.

Refiners, Compounders and Jobbers interested in making their own greases will find this book "GREASE COMPOUNDING MADE EASY" a profitable investment.

Send check for $25, and this book with 100 Grease Formulas will be mailed you promptly.

NATIONAL PETROLEUM NEWS

1213 W. 3rd St., Cleveland, O.

"The disclosure is a cracking process and Benton's statements clearly mean that by cracking he converts the lighter fractions of benzine into the heavier fraction, illuminating oil, by cracking under pressure and condensing at atmospheric pressure.

"If Benton ever did this he is probably the only man in the world who ever did it.

"It is more reasonable to suppose that Benton did not understand clearly the results of his operation; that he got additional kerosene by cracking the fractions heavier than kerosene and that his gasoline or benzine fraction was somewhat increased rather than diminished.

"The citation is directed against the Hall patents and the Palmer patent.

"All that it exhibits as against Hall is one separate step of the Hall process, namely: Lowering pressure.

"But even this step is distinguishable because at the point where Hall lowers pressure he has a vapor stream; and at the point where Benton discharges through his valve the entire product is both liquid and vapor.

"But the novelty of Hall is not in this particular step and Benton does not show the invention of Hall.

"A comparison of the disclosure with Palmer will readily show that Benton's is not the Palmer operation."

A Pielsticker patent U. S. No. 477,-153 covering a tube cracking installation was disposed of by the special master as follows:

"We have heretofore discussed the Pielsticker disclosure and need not again here describe this alternative process; nor add anything to what has heretofore been said concerning Pielsticker's disclosure.

"Kornfeld, French patent No. 328,-051 of 1922 is disposed of as follows, after describing Kornfeld's process at some length:

"As this is a kerosene making apparatus and as the gasoline was a waste product which he carries to his furnaces for fuel to heat the apparatus, the plain teaching of his patent is, 'Beware of sufficiently cracking to the extent that an excess of gasoline is produced.'

"His stock operated upon is crude oil.

"This process does not disclose the Adams invention or the Clark invention or any of the inventions of the patents here in issue."

Nikiforoff, U. S. Patent No. 755,309

THE patent is concerned with the manufacture of benzol, toluol and other aromatic hydrocarbons from crude oil—specifically the Russian oils not containing sulfur.

"There is nothing here which discloses the invention of Adams or Burton or Humphreys (runback).

"Taking either part of the apparatus of Nikiforoff, one skilled in the art would have to devise some additional step and apparatus to make a satisfactory motor fuel and would pay no attention to the second part of the apparatus or process. The temperatures suggested by Nikiforoff in his second step (1652 to 1832 degrees Fahr.) are entirely too high on any material to make a successful motor fuel process."

In commenting upon Testelin and Renard, British patent No. 16,881 of 1908, the special master says:

"The rerunning of heavy synthetic tar is not the equivalent of the operation where Burton returns to his first pressure still the distillate of his second atmospheric still, because Burton returns the lighter stock and not the heavier.

NEITHER does the distillation tube cracking process in any way disclose the Burton and Clark process.

"While it may disclose one step in the Hall process, namely the step of lowering the pressure on cracked vapors, it does not disclose the Hall invention.

"Its citation against Adams is fanciful. It does not show pressure through the condenser, even if it disclosed some step in the Adams process. The Adams patent was granted after consideration of this reference and also Nikiforoff.

Over the citation of Kittle, French patent No. 417,532 of 1910 the master becomes humorous. He says:

"This is a diminutive apparatus and it is suggested in the patent that it may be installed upon an automobile. As it represents a coil 20 feet long and one fifth of an inch in diameter, immersed in a lead bath, heated by a gas burner to a temperature of 1292 degrees Fahr., whoever put this upon an automobile and sat over it for a few minutes would in all probability realize that 'hot bottom' is still a burning issue."

Of the Noad patent, U. S. No. 971,-468, the master says:

"As a citation against the inventions of Adams, Burton or Humphreys, Noad is wholly irrelevant."

Following his consideration of tube cracking art, the master devoted some attention to "flash cracking prior art" and "miscellaneous prior art." Under the former heading he states that all the patents cited by the government are "remote from any of the claims of any of the defendants." Patents thus disposed of under this classification are:

Mann, U. S. No. 619,593 of 1899.
Bresson, French patent No. 108,214 of 1875.
Barbet, French patent No. 390,558 of 1908.
Inschick, Russian patent No. 4,584 of 1890.
Barbet, French patent No. 380,282 of 1907.
De Souches, French patent No. 343,-390 of 1904.

Under miscellaneous prior art, the

following patents were considered and found to be irrelevant:

Atwood, U. S. Patent No. 28,448 of 1860.

Gaster, British patent, No. 6,739 of 1901.

Lennard, U. S. patent No. 659,076 of 1900.

Warden, U. S. patent, No. 1, 010,806.

De Clerq, German patent No. 166,-723 of 1906.

Henderson, U. S. patent No. 340,-878 of 1886.

Barbet, French patent No. 434,677.

Barbet, British patent No. 27,005.

Of Dubbs U. S. patent No. 1,123,502, of 1915, considered under this head, the master finds:

"This Dubbs patent was cited against one of the Adams applications and is probably offered by the petitioner in connection with the Adams file wrapper, having a bearing upon the contention that two of the Adams patents are void for fraud in obtaining the allowance of them.

"The object of Dubbs was to separate water from emulsified California oils. Whatever cracking ensues in his process is merely incidental. The Adams patent claims were distinguished from the Dubbs in the patent office. The government as petitioner is bound by the adjudication of the office. The question of alleged fraud in carrying back Adams' date of invention is hereinafter considered."

Gas Penetrates Upper Sand In Winkler County

FORT WORTH, Jan. 14.—A serious operating problem in the Hendricks field of Winkler county has resulted from gas saturating an upper water sand and causing blowouts over a wide area. The gas has come up from below and penetrated the relatively shallow water sand, blowing out between casing strings and creating a situation similar to that experienced by Smackover, Ark., operators at the height of development.

The lime pay horizon is not affected by the present development, which is strictly an operating problem to be handled by better methods of setting casing and preventing dangerous practices. A single old well which had been long since abandoned is credited in first reports from the field with providing the vehicle for gas saturation of the upper water sand and the resulting blowouts.

Wells affected include the Republic Production Co's. Nos. 2 and 3, in sec. 41, public school lands block B-5; Atlantic Oil Producing Co's. east offset to No. 3, in the southwest corner of sec. 40; the Murchison et al No. 3, a half mile southeast in sec. 35; Gulf Production Co's. well near the center of the east line of the northwest quarter of sec. 34; Southern Crude Oil Purchasing Co's. well in the northwest of sec. 35, which was reported flowing 15,000 barrels of water from the blowout.

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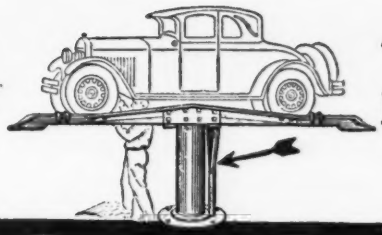

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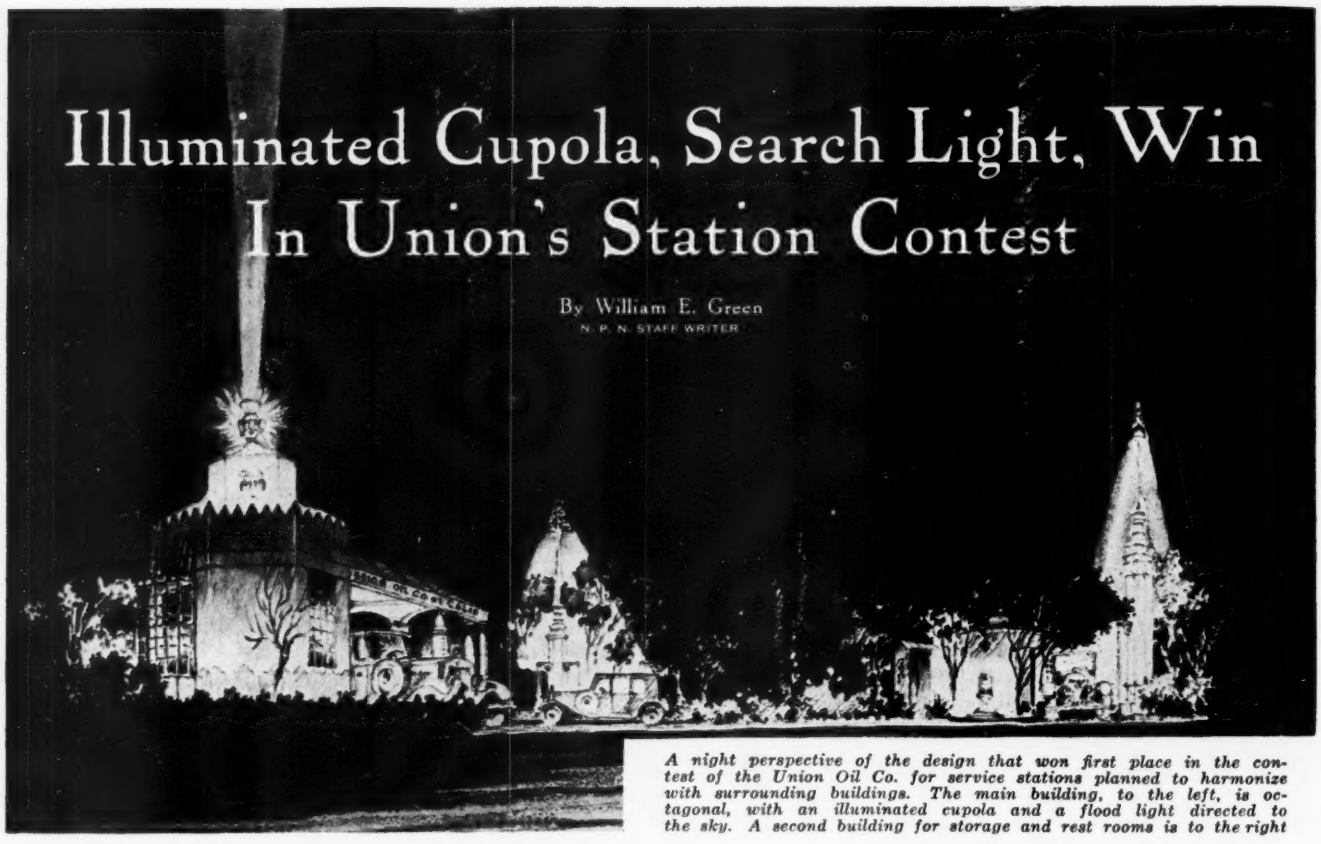
SALES OFFICES, 114 FIFTH AVE., NEW YORK

Illuminated Cupola, Search Light, Win In Union's Station Contest

By William E. Green
N. P. N. STAFF WRITER



A night perspective of the design that won first place in the contest of the Union Oil Co. for service stations planned to harmonize with surrounding buildings. The main building, to the left, is octagonal, with an illuminated cupola and a flood light directed to the sky. A second building for storage and rest rooms is to the right

LOS ANGELES, Jan. 14

AN OCTAGONAL sales building topped with an illuminated cupola and a flood light directed into the sky and a secondary building in a corner of the station plot for storage and rest room, was the winning design in the recent contest of the Union Oil Co. for designs for artistic service stations that would harmonize with the neighborhood.

Lyle Reynolds Wheeler, Hollywood, who is employed by Ralph C. Flewelling, architect in Beverly Hills, submitted the winning design and won the $1,000 first award. The second award of $650 was given to Harbin F. Hunter, Los Angeles, and third award of $350 went to Harry Sims Bent, Los Angeles. More than 100 designs were submitted. The Union Oil Co. set a maximum of $3,000 as the cost of stations designed for the contest.

The winning design presents a pleasing appearance, and was designed to be adaptable to almost any lot. The designer intended that it should be made of metal to be portable. But this feature probably will be lost, as it is understood the Union will make the stations permanent rather than portable.

A cupola rises in the center of the main building, with flood lights thrown upon all sides, especially bringing out in relief a shield, used by the Union as a trademark. A flood light directed into the sky is an idea that has been used in Hollywood for years to advertise new theatres, and grand openings of all kinds. On clear nights the play of the flood lights in the sky can be seen for miles around. The flood light cost would not be great, as outlined by the architect.

One of the factors of the design is the arrangements provided for the rest room facilities, in connection with a kind of a store room, located apart from the service station building proper. There are two rest rooms. In most stations two sets of plumbing are necessary. Not so with Mr. Wheeler's design. The rest rooms are so placed that one set of plumbing is sufficient. A drinking fountain is also provided outside the rest room building, but not too close to either entrance door. Another Union shield is also placed at the drinking fountain.

Plenty of lighting is provided for. The yard is well lighted by lamps on standards about the court. The design calls for flag stone paving, but this is optional. The design also provides for a canopy, but this is also optional. One canopy or two can be used, or none.

The design permits the use of the Union colors. The design in colors used is white with a blue green wainscot, and red and white for the shields. Also the design calls for a shield in the court, worked out

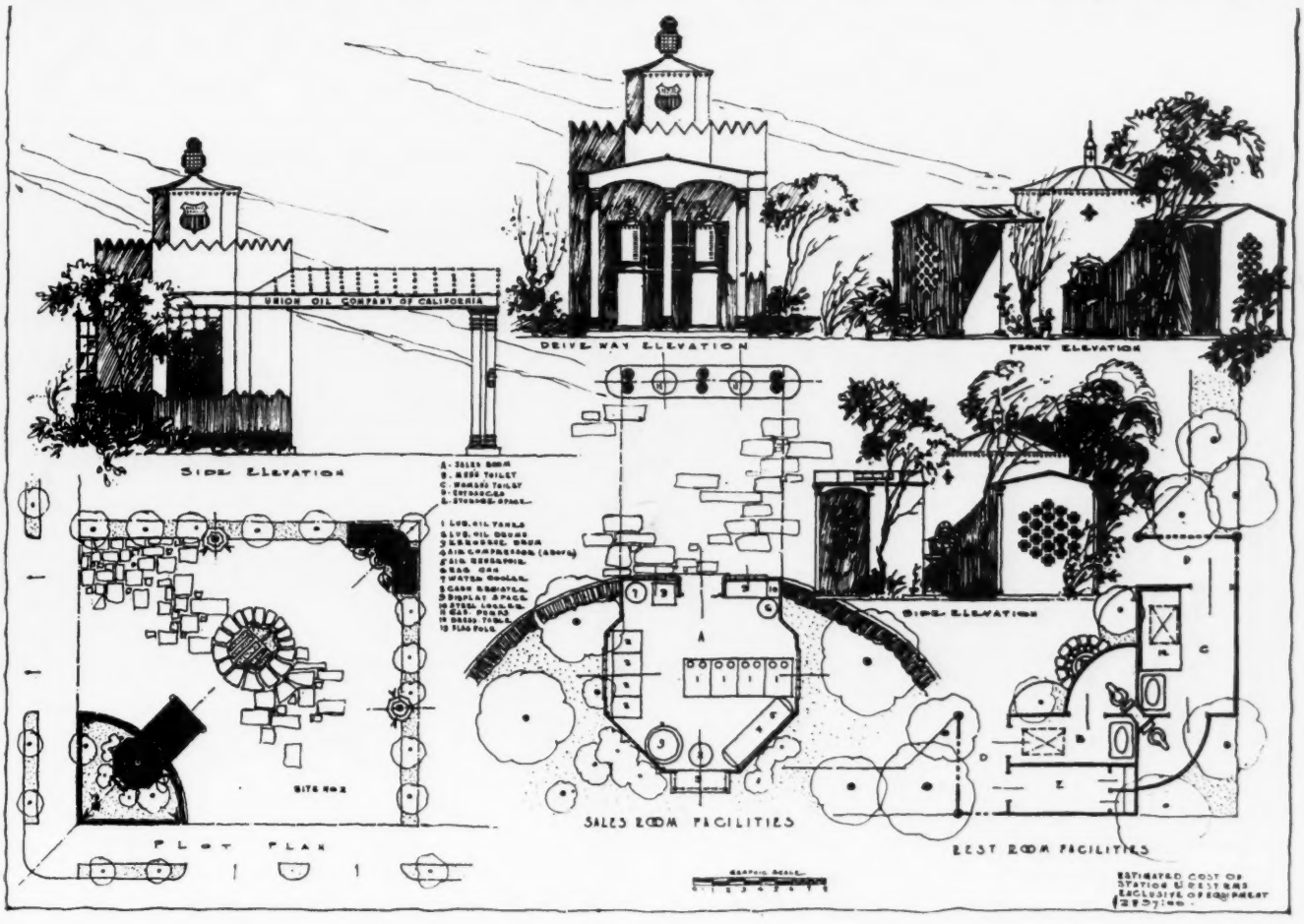
THE recent contest of the Union Oil Co. for designs of attractive service stations that would harmonize with other buildings in the neighborhood has culminated with approximately 100 sketches submitted and the winners of the three awards are announced in the accompanying article.

Details of design and construction for the competing architects were published in NATIONAL PETROLEUM NEWS, issue of Nov. 16, page 31.

The architects were limited to a maximum of $3,000 to pay for cost of the station, exclusive of site and equipment. There were to be at least two units to the stations, one for the salesrooms and another for rest rooms. Four sites were to be assumed, and it was urged that architects bear in mind the advantage of a design adaptable to all of the given locations. Space also was to be allowed for the displaying of one-gallon packaged goods.

Whether the designs were for stations with or without a canopy was optional, as was the type of building material and of architecture. The contestants were given as wide a range of architectural freedom as was consistent with operation of the station and the building cost.

Elevations and Ground Plans for the Winning Design



with flag stones, in colors.

Standardization in design has been the rule with many marketers, but Union officials are reaching a different conclusion. They wish to build stations that will harmonize with their surroundings, not to a stock design for all vicinities.

Mr. Hunter's second place design was of a modernistic type and it is distinctive in that only three materials are used in its construction—metal, marble and glass. Modified Spanish was the motive used by Mr. Bent in his third place design, being attractive to those who like the Spanish touch, and suitable for many locations in southern California. A large number of designs received honorable mention.

The Union reserved the right to use any design submitted, and any adaptation of any design.

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85 Bureau Mines Films in West

SAN FRANCISCO, Jan. 14.—The San Francisco office of the U. S. Bureau of Mines has been designated the Pacific coast distributing center for the motion picture films of the bureau, and about 85 reels are now being carried in stock. People desiring the loan of any of these films can secure information by addressing the U. S. Bureau of Mines, 506 Custom House, San Francisco.

Governor Decries 10 Miles of Ocean Drilling

LOS ANGELES, Jan. 13

ONCE more the oil man is being made the goat. This time, it's in California, and the governor is taking the lead. Jan. 1, a signed statement from Gov. C. C. Young of California appeared in the various newspapers of the state, taking as his battle cry, "Save the Beaches for the People."

He describes California's "hundreds of miles of picturesque and beautiful coast line"—a coast line which he writes should be a heritage for all future generations. And he asks the public to help him save the beaches—from the oil men.

The governor fails to mention that California has about 875 miles of Pacific ocean water front, and of this great total, a derrick has approached nearer than a half mile at just three points within the state. At Summerland, wells in the ocean have been producing since 1894. Probably not to exceed five miles of the beach at this point is marred—and the derricks themselves occupy considerably less mileage.

At Huntington Beach, there is a row of derricks just above high tide line, but a costly retaining wall has been erected to protect the waters of the ocean from being polluted in any manner. This point is "marred"—if you wish to say it's marred—for only about one mile. And recently they started drilling at Rincon in Ventura county, some eight miles from the city of Ventura, along the ocean front. This last movement to drill tide lands has started all the fuss.

Certainly not to exceed 10 miles of water front to date has been "marred" by oil well derricks along the entire coast of California out of a total of at least 875 miles.

The governor fails to mention the hundreds of miles of ocean front fenced off by private property owners, who, in many instances, refuse to permit the general public to even approach the water's edge. Strong fences have been built. Many times, the roads are narrow—so narrow that the head of the family out for a Sunday drive in his flivver, accompanied by the whole family, dares not stop for even a few moments to feast the eye upon the broad expanse of the great Pacific.

Geologists contend that there is extreme doubt if oil is to be found under the ocean to exceed five or six points along the entire coast line.

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A Golden Opportunity ~

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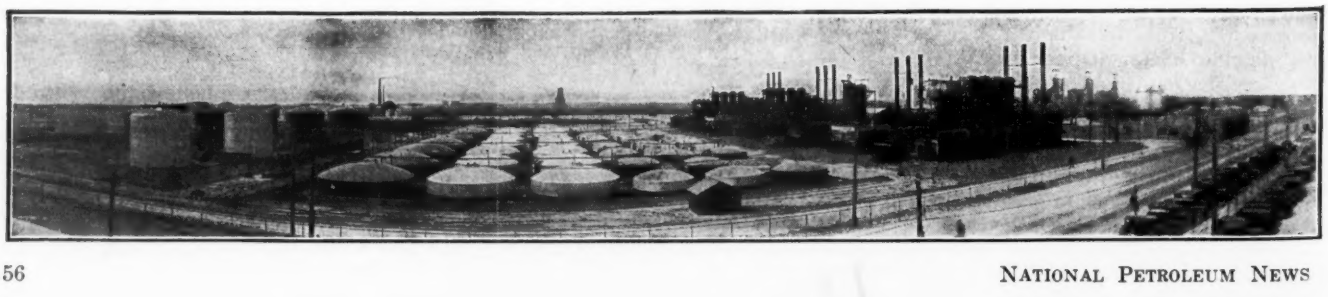
AT EAST CHICAGO, INDIANA



Trend of the Times

By Lawrence E. Smith

N. P. N. STAFF WRITER

National Petroleum News

Wants Data on Old Oil Exchanges

IN TULSA there has been some agitation for an oil exchange, where crude oil and perhaps refined products would be actively traded in. The discussion reached the point where the Chamber of Commerce appointed a committee to investigate.

This committee is finding it somewhat difficult to get information. Oil exchanges have been tried and have failed. The reasons why they failed are sought by this committee.

James H. Gardner, of the Gardner Petroleum Co., Tulsa, is chairman of the committee, and facts as to early exchanges as well as opinion on the workability of an exchange today will be gladly received.

Court Backs Up Leasing Policy

A NOTABLE decision handed down in December by the supreme court of Wyoming elucidates a principle which, if properly heeded by the legislature of the state, will encourage the development of state owned lands. If Wyoming takes the suggested action that the oil industry has long felt should be taken and provides for certain tenure on oil and gas lands, it will line up with Montana, Colorado and New Mexico, which assure the operator who undertakes development that he will not be disturbed in his possession so long as he proceeds in an orderly manner and so long as the property yields oil or gas in economic quantity.

The case before the court was an appeal by Henry A. Miller who had sought a lease on a tract in the Grass Creek field, developed by the Ohio Oil Co. The Ohio first obtained the lease, a five-year one, in 1914 and obtained a renewal in 1919. Last expiration date was June 19, 1924. On the day before expiration, Henry A. Miller filed application with the land commissioner, offering to pay the state a royalty of 33 1/3 per cent and to pay for the improvements as required by law. The commissioner rejected the application and granted the application for renewal filed by F. E. Hurley, vice-president of the Ohio Oil Co., in whose name the lease was held.

Next steps in the proceedings were an appeal by Miller to the state board of land commissioners, who after considerable delay renewed the Ohio's lease. From this decision Miller appealed to the district court of Hot Springs county, in which county the Grass Creek field is located. This court found in favor of the Ohio, whereupon Miller went to the supreme court.

Had Miller, whose associates were the Bonfils and Tammen interests, publishers of the Denver Post, been victorious, there would have been presented the novel spectacle of a pioneering company being ousted from lands which it had developed and operated for some 13 years, during which time it had spent in drilling costs alone on the lease in question, more than $275,000. The supreme court brought out in its opinion that Miller had gone to the land commissioner just before the 1924 expiration date and inquired whether the state had any vacant lands. He was told that there were plenty, but he asserted that he was looking only for proven land.

There have been other instances in Wyoming of attempts to "jump" the leases held by operators who have gone in, taken all the risk, and established the value of the state lands. It is a fortunate thing that the matter finally got into the supreme court of the state. As everyone knows, the cost of exploration in Wyoming is high and the returns have been, to date, meager. For instance, the Ohio Oil Co. it was brought out in the court's opinion, had tested 19 structures and that only two had been commercially productive.

SAID the court: "Sec. 699, Wyoming Compiled Statutes of 1920, gives the land board power to adopt reasonable rules and regulations binding upon applicants for leases. Sec. 75 of these regulations provides that it is the policy of the board to give great consideration to applications by former lessees who have made valuable improvements on the lands leased. We think this regulation is not unreasonable. It is for the board to adopt that rule or policy, consistent with law, which to them shall seem most beneficial to the state of Wyoming. . . .

"The policy of the board to renew leases at the expiration thereof where the lessee has expended large sums of money in developing such leases is probably based upon the assumption that to do otherwise would discourage persons from leasing state lands for the development of the minerals underlying them. A person or a company would not be willing to expend hundreds of thousands of dollars in drilling unproven territory for oil unless he could with reasonable assurance expect to be granted a prefer-

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THREE MODERN REFINERIES:
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THE G. & B. T-140 Visible Discharge Indicator gives adequate visibility at low cost to any piston type pump. On pumps dispensing colored gasoline, it displays the fuel attractively.

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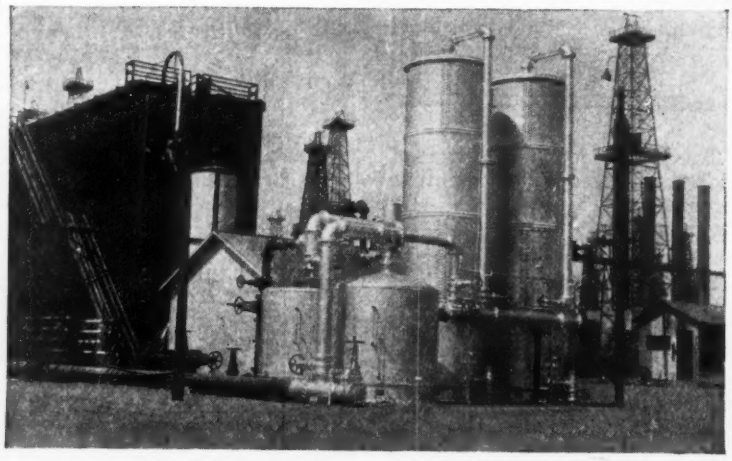

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—over 1,000,000 gallons of natural gasoline are produced by Campbell Oil-Froth Absorbers. Every Campbell plant replacing an old installation has greatly increased the production of gasoline from the same amount of gas. Facts worth pondering over.

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ence right to renew the lease at the expiration thereof, provided he were willing to pay a reasonable royalty for such renewal, to be fixed by the land board."

The preference right in Wyoming is not now a matter of law, but of policy adopted by the state board. The legislature should remove all doubt in the matter and make the preference right of renewal on short term leases a matter of law.

Foremen Grasp Economy By Monthly Cost Statements

THE idea of economy, imparted patiently over a period of four years, by a major producing company to its field superintendents, is working wonders. In any district it operates this company can match the costs of any operator there—and generally is a little under the rest.

Every foreman is given a statement monthly showing how much it cost to operate each lease in his district. The costs are itemized—he knows where every penny was spent. He is also given some comparative figures at times, letting him know whether he is getting along as cheaply as the rest of the foremen. It is all figured out for him on a per barrel basis. Any foreman knows whether he is going up or down, not only in the efficiency scale, but in the company's rating of him individually.

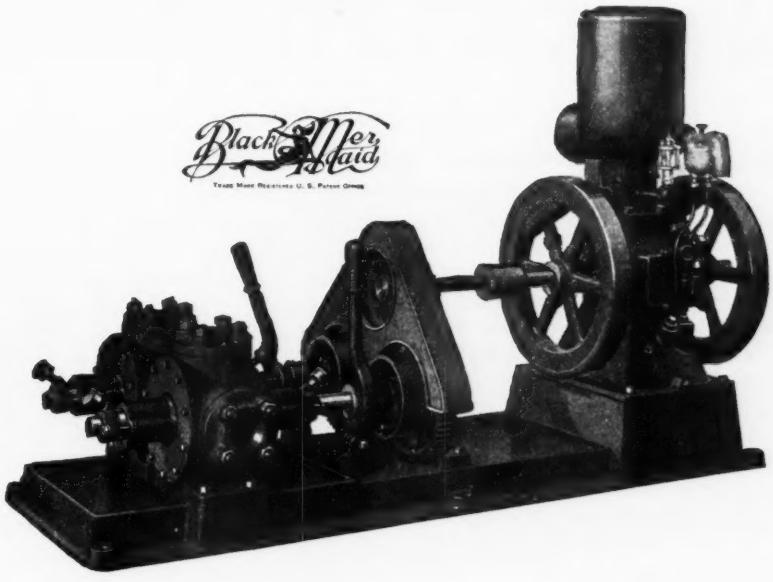
The plan didn't accomplish its intended results all at once. But by persistently sending out this little statement to each foreman at a definite time each month, it has brought about the kind of thinking the company intended it to.

Cities Service Buys McGovern-Place

CHICAGO, Jan. 16.—Cities Service Oil Co., recently purchased the McGovern-Place Oil Co., of Racine, Wis., having eight filling stations and 100,000 gallons of bulk storage. The service stations are all in or near Racine. The consideration was not announced.

This is the fourth purchase of a successful Independent jobber in Wisconsin within the last few months. First purchase was of the Winona Oil Co., Winona, Minn., most of its sales outlets were in Wisconsin; second the C. H. Lockwood Oil Co. Kenosha, Wis., and later the Interstate Oil Co., La Crosse. Cities Service now has about 300 stations in Wisconsin.

For the present the McGovern-Place Oil Co. will become a subsidiary of the Lockwood Oil Co., but eventually both will be a division of Cities Service Oil Co. E. T. McGovern, one of the three organizers and president of the company will continue to manage the properties and operations in Racine.



26 Years of Pump Building

Every progressive concern is constantly aiming to improve its product or lessen cost without lowering efficiency.

For 26 years our engineering and research departments have worked towards that end.

Today we are producing a much better pump than ever before in our history. Production methods have grown more accurate—metals have improved—the lessons that can be learned only from years of practical experience have been incorporated in the present product.

The basic Blackmer principle of automatic - take - up - for - wear, remains unchanged. It was right 26 years ago just as it is right today.

Even a small error in the installation of a pump is a constant drag upon efficiency and power. Upon your request we shall be pleased to mail you a booklet entitled "Pumping Equipment for Bulk Stations", prepared especially for the oil jobber.

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Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

Unsafe Refinery Equipment Costly

RECENT developments make it appear that one of the most expensive ways to save money in the refinery is to keep on using stills or other units which either are known to have a low factor of safety or which have not been rigidly tested to determine their condition. This applies, of course, chiefly to pressure cracking equipment.

The least that can happen from such a course is that yields will be reduced by reason of holding down pressures to keep within the bounds of safety dictated by weak vessels.

The worst that can happen is explosion and fire which may cause many deaths and heavy damages to the families of workmen killed. It is conceivable, of course, that where the strength of cracking vessels is known to be impaired, it may seem better because of lack of capital for new equipment, to operate them for a time at reduced pressure and consequent lower yields, rather than to shut them down. One refinery I visited recently is operating two of its cracking units at pressures below those known to give greatest efficiency, in order to keep within a proper factor of safety. Such a course can only be regarded as a temporary makeshift, however.

But where cracking units are run without regular and frequent inspection by experts, when they are operated blindly without knowledge of whether they are safe or not, is likely to be very difficult for those responsible to defend themselves in court against liability for heavy damages if an accident occurred from this cause and anybody was hurt.

Royalties on Cracking Operations

IN THIS day when efforts of refiners and makers of refinery equipment are bent toward reducing cost of making refinery products in every way possible, one factor in the cost situation remains unchanged. This is the royalty charged licensees of cracking processes.

The royalty charged by the owners of different processes varies somewhat but a fair average probably is about 30 cents a barrel on finished gasoline produced. This means that regardless of the point to which the refiner has reduced the manufacturing cost of his gasoline, he still has to pay about three quarters of a cent a gallon on the product of his cracking stills.

This puts him at a serious disadvantage in competition with those refiners who own cracking processes and hence operate them royalty free.

There are two motives for charging royalty for using a cracking process. One is, of course, the revenue derived therefrom and this probably the controlling motive. However, another possible motive is this very fact of putting competing refiners under a handicap of production cost.

A good many refiners who are licensees of cracking processes have found this three quarters of a cent a gallon royalty charge prohibitive and have shut down their pressure stills. This situation may be pleasing to those cracking process owners who are also refiners because if it does not bring any revenue into their pockets, it does reduce to some extent the amount of gasoline being thrown on the market and is beneficial to the price structure to that extent. However, the situation can hardly be pleasing to those companies who derive their whole revenue from the royalties paid in by licensees.

We wonder if there will be markdowns in the royalty rate charged in the effort to encourage refiners to operate their cracking plants on a larger scale.

K. J. Smith is Married

SKELLY NEWS, January issue, carries the tidings that K. J. Smith, superintendent of the refinery of the Skelly Oil Co. at Eldorado, Kan., has become a married man. The bride was Miss Anita Matson, formerly employed in the purchasing department of the Skelly company.

The marriage took place at the home of the bride's sister in Pittsburg, Kan. Nov. 24 was the date but the wedding was not announced until Dec. 14. I saw "K. J." at the American Petroleum Institute meeting in Chicago and he never said a word.

Congratulations and best wishes.

Cracking Straight Run Gasoline

REGARDLESS of what may be its fate in the future, it is certain that anti-knock fuel has captured the fancy of the public now. One very large company which puts out no anti-knock fuel is finding the inroads on its sales so serious that it actually has up with a consulting chemical engineer the possibility of cracking in the vapor phase the straight run gasoline of which it makes a large amount. The company officials have stated that they are prepared to stand a heavy loss in fixed gas for the sake of putting out a motor fuel that will meet the anti-knock fuels that are offered in competition.

It is pretty difficult, in general, to sell gasoline of U. S. Motor specifications nowadays. I made this statement to an Oklahoma refiner at the Institute meeting and he argued against that view. I asked him what percentage of the gasoline he was making was of U. S. Motor specification. He thought about 70 per cent.

When questioned further, however, he stated that the initial boiling point of this 70 per cent which was his competitive gasoline, is about 100 instead of 131 as prescribed for U. S. Motor and the end point around 415 to 420 instead of 437.

Refinery Engineer Makes Trip to Europe

H. E. WIDDELL, head of the Widdell Engineering Co., affiliated with Arthur G. McKee & Co. of Cleveland, sailed from New York on the Mauretania Dec. 30 for Continental Europe. Mr. Widdell, who is well known in the industry as a refinery consulting engineer and builder of refinery equipment, is on company business and expects to be gone about a month. His exact mission and destination is withheld.

Flashing

Dubbs Licensees can now add the Dubbs Flashing System and obtain

50 to 55% gasoline (Knoxless-Pullsmore)

47 to 42% marketable fuel oil and distillate

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Are Sales Managers Responsible For Price Cutting?

By Saunders Norvell
President, Remington Arms Co., Inc.

IN A certain industry that sells raw material almost entirely to manufacturers, one large producer, by a secret cut in price, took a very valuable account away from one of his competitors. Of course, when this manufacturer stopped buying from his original source of supply, they realized what had happened. As this concern was not any too strong financially, in order to keep their business going they very naturally offered a cut price to another manufacturer, this cut price being less than the cost of production. They secured a large order. This order would at least keep them going for a year, even if they did not make any profit. With this producer it was not a question of making profits—it had become a question of existence; a question of not shutting down the factory and going into the hands of a receiver. A third producer in the same line of business, learning of these cuts, issued a circular in a spirit of retaliation in which he cut the price to the entire trade of the country—big and little.

Now we have the situation where this entire industry is on a price basis of less than the actual cost of producing the goods. In this situation, these several producers, in turn, with their cut prices each went after the business of a manufacturer who uses a large quantity of their goods.

Imagine the surprise of these three producers when this manufacturer told them flat-footed that he did not wish a lower price. He told them, in fact, that, with conditions as they existed just at present, all of them were using exceedingly bad judgment to cut prices. This manufacturer said to them: "If you cut prices on your raw material, logically it will only be a question of time until this price-cutting will travel to the manufactured product. Just now, we are making only a small profit on the manufactured goods and we cannot stand a cut in price. As manufacturers, what we desire more than anything else is a stabilization of the market. If you cut your prices and if we cut our prices, this cutting of prices will automatically lead to a curtailment of business because everyone knows that the general trade never buy freely on a declining market.

"Now, gentlemen," said this manufacturer, who evidently had his nerve with him, "stop and think this thing over. Do not quote us any cut prices. Go home and withdraw the cut prices you have already made. Do your level best to fix up the situation. We ourselves will not be parties to any plan to demoralize our line of goods, and the first step is to stop the people from whom we buy our raw material from starting the demoralization."

Naturally, the position taken by this manufacturer, judged by common standards, was a rather original one. In discussing the subject with him, I asked him to go a little deeper into his view of the situation. "Well," said this manufacturer to me, "we are one of the largest users of this product in this country. Naturally, we have always enjoyed an inside price on account of the quantity of the goods we buy. We have never used this inside price in our sales price. We have set it aside as an extra profit and it has helped us in developing our business and in giving better service to the trade.

"But don't you see, if all these producers in this line sell their goods at cost or at less than cost, they are not in a position to do anything, either for themselves or anybody else? When a market is demoralized and goods strike cost, the price is usually the same to everybody and even large and intelligent buyers cannot obtain any special inside prices. Therefore it does not take much intelligence to see that it is not to the interests of a large buyer to see the market on any of the goods he uses go into a demoralized condition. Unfortunately," said my friend, "there are a number of buyers who buy for large institutions who have not thought deeply enough into the subject to see the truth of this principle."

Here is another interesting case that has recently come under my observation: In a certain industry, there is a very powerful seller who, by reason of almost unlimited capital and a great variety of products, has, by cutting the prices in one department of his field, practically eliminated all of his competitors. There are only three or four manufacturers left in this field in the United States. None of these manufacturers is making any money. This powerful manufacturer announced on a certain date that he proposed again to cut the price. One of his weaker competitors, who carries a large burden on his business in the form of bonds, went to this powerful rival and said "Now, let us lay our cards on the table. Let us talk straight. You now sell a very large proportion of the goods in this line. You are selling these goods without any profit because you make profits on other goods that you manufacture in other lines. Just what is your object? Do you expect to kill off all of your competitors in this line and be the sole manufacturer of this line in the United States?

"No," replied the powerful manufacturer. "Naturally, that situation would not appeal to me. Naturally I must have a certain amount of competition." "All right!" said this

THE accompanying article was sent to NATIONAL PETROLEUM NEWS by P. M. Miskell, general manager of the Empire Refineries, Inc., Tulsa, and president of the Western Petroleum Refiners' Association with the following letter:

"In the Dec. 29 issue of Printers' Ink there is an article by Saunders Norvell, president of the Remington Arms Co., entitled "Are Sales Managers Responsible for Price Cutting?" which, to my mind, is one of the best articles that I have read in a long time and aptly points out the existing conditions in a great many businesses.

"His comment on the conditions in his own industry is very applicable to the existing conditions in the oil business today, and I would like to see this article published, so that we might have an opportunity to refer it to some of the people who are mainly responsible for the existing conditions in our industry today."

The article originally was written by Mr. Norvell for the Iron Age.

weaker manufacturer. "Which would you rather compete with—a concern like ours in our present condition *or a concern like ours in the hands of a receiver?* There is no question whatever that if this competition continues as it has been, we are going into the hands of a receiver. If we do go into the hands of a receiver, I will probably be the receiver myself. Naturally, as a receiver for the business, I will be relieved of the obligation of paying interest on bonds and I can also escape from many other obligations under which we now labor. In other words, don't you see that as a receiver I could be a much harder competitor for you than I am at present?"

Not Trying To Freeze Out Competition

"But," said I to my friend who was telling me these interesting things about American business today and who also told me that these cases were not uncommon; that, no doubt, there were many of them in the trade in all of the various lines, "isn't it the object of these manufacturers today who are taking advantage of their strong financial position, to freeze out weaker competitors, to get the entire market in their hands and to be afterward in a position to advance prices?"

To this inquiry he made the most surprising answer. "No," said he. "I do not think that is true. What I do think is true in many industries is that the leading men—the men who have the capital invested—the real owners of the enterprise, when their businesses are in a prosperous condition have practically turned over the selling end to sales managers who are interested chiefly in making sales records. I am of the opinion that many of these sales managers in the United States today are doing things in the way of authorizing cut prices without thought of what it all means, and the heads of these businesses, in many cases, are not paying close attention to the business. They take the reports of the sales managers."

This merchant told me that in one industry he took occasion to call the attention of the head men in the business to some of the things their sales managers were doing. This led to an investigation of conditions upon the part of the heads of several large enterprises. These proprietors, who are older, who are mellower and who are not stirred up by the selling battle and all of the animosities and jealousies that arise in the selling of goods, got together quietly and talked over what their sales managers were doing.

The result of this meeting was that the sales managers received the surprise of their lives in some of the instructions that came to them direct from headquarters. Human nature is always human nature. All of us are very apt to be more generous on an expense account with

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someone else's money than we are when we are traveling and paying the bills out of our own pocket. All of us, being human, are more inclined to cut prices when the loss of profits as a result of the cut comes out of the pocket of someone else!

These reflections have all led me to think of buying and price-cutting. Some buyers with a .22-short mentality, when they secure a special concession, delight in telling all the salesmen who call upon them about the cut price. This puffs up their vanity. How foolish they are. I know of buyers who, when a salesman calls, will tell him that his prices are no good; that he had better write home and get lower figures so he will be in the game. What happens after a foolish talk of this kind? The salesman does write home. He does influence his house to give him lower prices. Then he calls on the competitor of our buyer and sells the competitor at these lower prices. In other words, by the loose wagging of his tongue our Smart Aleck buyer is simply helping his competitor buy his goods 5 to 10 per cent cheaper!

How well I remember that it was the policy of the Simmons Hardware Company under I. W. Morton, that great buyer of the house, always to protect the seller on his prices. How well I remember when this house was enjoying a special rebate from a factory and other salesmen called, attempting to get the business, that they were told, *not that their prices were too high;* only that the house at that time just happened not to be needing any of the goods or had made other arrangements. In other words, it is one of the first duties of a good buyer to soothe the visiting salesman with the idea that his prices are entirely right and that other reasons besides prices led to the placing of the business elsewhere.

Give Thought To The Welfare of The Industry

Summing up the reflections in this article, it would seem that we should have a broader vision on the part of those in charge of sales and on the part of those in charge of buying than exists at present in many cases. All of us, in times like these, should think very seriously about the general welfare of the industry in which we are engaged. Paradoxical as it may appear, the manufacturer who comes around to the buyer with a cut price is not always the best friend of this buyer. This manufacturer is often an enemy to the welfare of the industry. All of us should get the principle in our minds that it is not always the low price that we receive which is the most advantageous. Low prices frequently lead to the demoralization of an entire industry. In every phase of this industry, from raw materials through the manufacturer, to the jobber, to the retail merchant, progress only can be made on those lines of goods where manufacturers, jobbers and retailers are making a fair and reasonable profit. Progress can never be made when goods are sold at cost or at less than cost.

The salesman who calls on you with a cut price is giving that cut price to your competitor. Often—in fact, usually—your competitor will use this cut price to reduce his prices. A cut price to you is generally followed by lowered profits.

Sun Shipbuilding Makes Equipment

NEW YORK, Jan. 14.—The Sun Shipbuilding & Dry Dock Co. has recently announced its increased business in manufacturing oil refining equipment and special equipment for chemical plants, paper plants, etc. The main plant of the company is at Chester, Pa., with New York office at 25 Broadway. The company now has contracts for large bubble towers, heat exchangers, condensers, stills, etc. This branch of the company's business is now well established and is being conducted in addition to their shipbuilding and ship repairs and Sun Doxford Diesel engine business.

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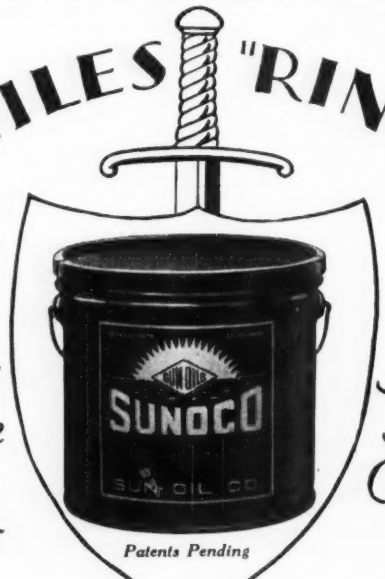

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The Niles Steel Products Co., Niles, Ohio

NILES RINGSEAL

Above Ground Stocks of All Products Were 222 Days' Supply Nov. 30

By Roger B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, Jan. 14

FINISHED petroleum products held by refineries and crude oil at refineries and in tank farms and pipe lines totaled 582,649,000 barrels Nov. 30, a gain of 5,222,000 barrels in November. This volume was equivalent to 222.2 days' supply at the November rate of domestic and export demand.

The 577,427,000 barrels of crude and refined oils in storage Oct. 31 represented 217.4 days' supply at the October rate of demand. The 516,543,000 barrels of stocks Nov. 30, 1926, represented 196.7 days' supply at the rate of demand that month, which averaged 4,000 barrels a day more than demand in November, 1927. Total average demand in November 1927 was 2,622,000 barrels.

This large gain in days' supply caused by an increase of above ground stocks of petroleum and a slight fall in demand, is revealed in the Bureau of Mines petroleum statistics for November, 1927. Other salient facts revealed in the November report are:

1. Decline in crude oil production from 2,486,500 barrels daily average in October to 2,459,300 barrels in November.

2. Increase in total crude oil stocks from 458,824,000 barrels Oct. 31 to 462,631,000 barrels Nov. 30, the largest volume ever attained.

3. Crude runs to stills averaged 2,523,600 barrels a day, the largest volume in the history of the industry.

4. Daily average gasoline production in November was at a new height, 951,900 barrels a day, a total of 28,558,000 barrels for the month, or 345,000 barrels less than the October total, October having one more day.

5. Increase of 851,000 barrels in stocks of gasoline to 30,401,000 barrels. This was the first increase in gasoline stocks since last March.

6. Domestic demand for gasoline averaged 813,000 barrels a day, compared with 822,000 barrels in October. The November demand was above expectations.

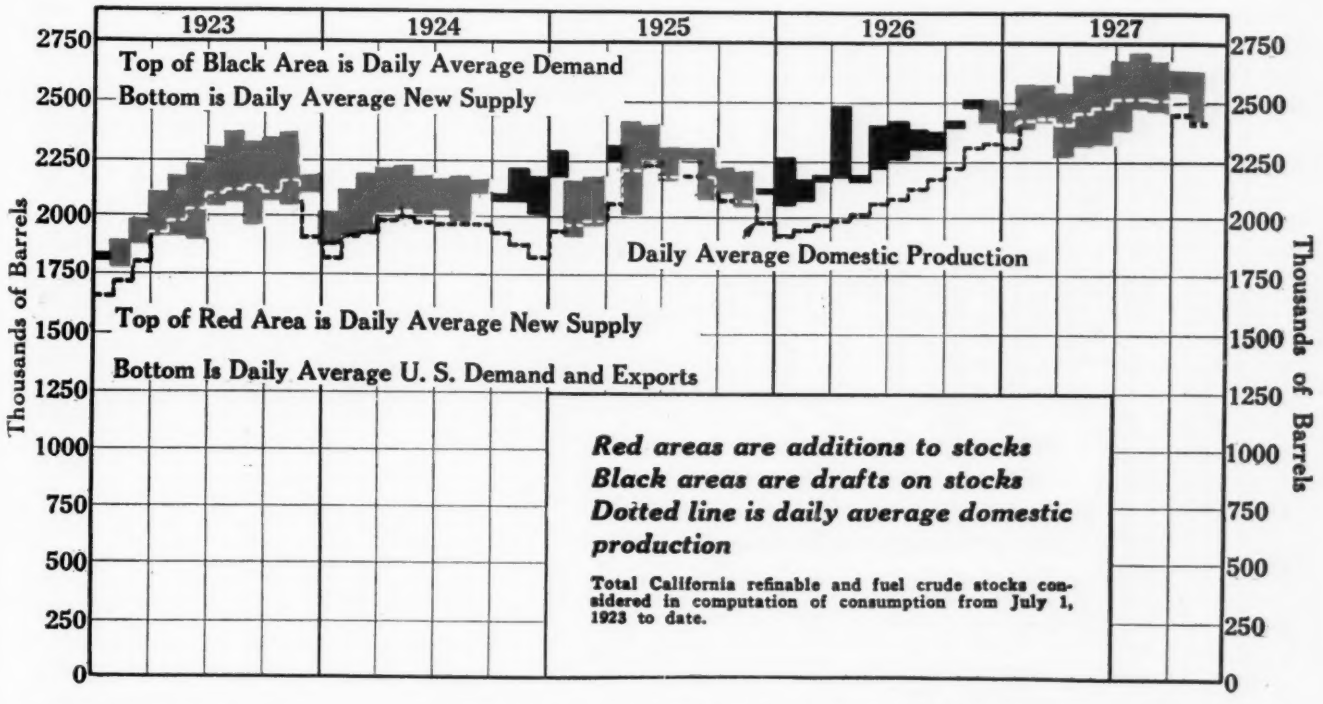
7. Increase of 39,000 barrels to stocks of natural gasoline, production averaging 3,360 barrels a day more than in October.

8. Kerosene output averaged 3,000 barrels more a day than in October. Imports and exports were less than in October and domestic demand less than in any month since June, 1925.

9. Average daily production of lubricating oils was 83,000 barrels, 6,000 barrels less than October average output. Export demand averaged the same in November as in October and domestic demand at 58,000 barrels daily average, was 1,000 barrels more than the October average.

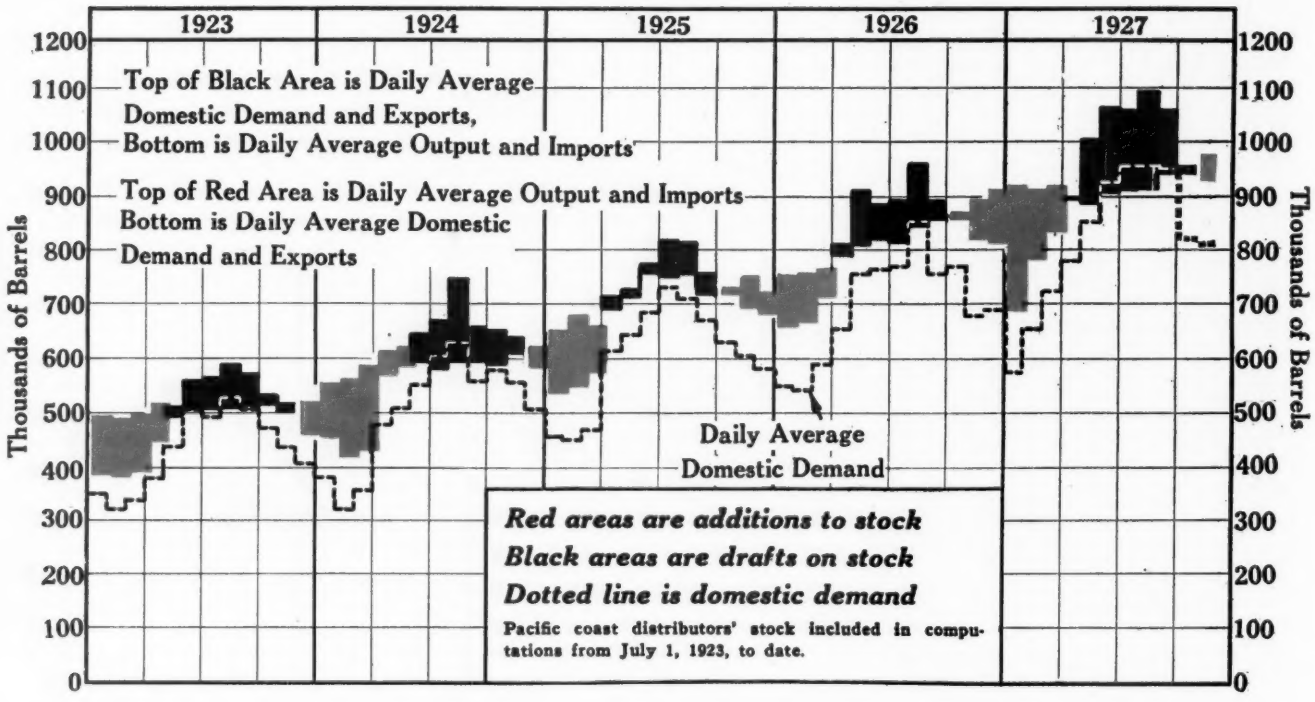
10. Wax production averaged 9,000 pounds a day more in November than in October. Imports averaged

Crude Oil Production and Demand



November domestic production	2,459,300 Bbls. daily av.	Stocks in pipe lines, and at refineries east of California, Nov. 30, 1927	309,719,000 Bbls.
November imports	178,000 Bbls. daily av.	Stocks at refineries east of California	38,827,000 Bbls.
Total new supply	2,637,300 Bbls. daily av.	Stocks of foreign crude at refineries	339,000 Bbls.
November indicated demand east of California	1,817,300 Bbls. daily av.	California stocks 20° A. P. I. and lighter	21,191,000 Bbls.
November indicated California deliveries	607,700 Bbls. daily av.	California stocks heavier than 20° A. P. I.	92,555,000 Bbls.
November exports	42,700 Bbls. daily av.	Total stocks Nov. 30, 1927	462,631,000 Bbls.
Total indicated demand in November	2,467,700 Bbls. daily av.	Increase in stocks in November	3,807,000 Bbls.
		Stocks Nov. 30, 1926	394,640,000 Bbls.

Gasoline Production and Consumption



November domestic output	951,900 Bbls. daily av.	November exports	124,100 Bbls. daily av.
November imports	13,900 Bbls. daily av.	Total indicated demand	937,400 Bbls. daily av.
Total new supply	965,800 Bbls. daily av.	Stocks Nov. 30, 1927	30,401,000 Bbls.
November domestic shipments	813,300 Bbls. daily av.	Increase in stocks in November	851,000 Bbls.
		Stocks Nov. 30, 1926	35,905,000 Bbls.

104,000 pounds a day, compared with 29,000 pounds in October, and exports averaged 1,085,000 pounds daily, a gain of 171,000 pounds over the October average exports. Domestic demand fell from 704,000 pounds daily in October to 580,000 pounds daily in November. Stocks increased 1,333,000 pounds to 171,700 pounds.

11. Gas and fuel oil output averaged 1,086,000 barrels daily in November, a decline of 12,000 barrels from November. Imports were larger and exports slightly less than in October. Stocks of gas and fuel oils east of California rose 1,143,000 barrels to 126,192,000 barrels.

12. Seven fewer refineries reported in November than in October. The 322 with daily crude capacity of 2,871,000 barrels, that reported in November, were operated at 81 per cent of their rated capacity. The 329 plants that reported in October were operated at 80 per cent of their rated capacity.

In the first 11 months of 1927, 62,552,000 barrels of crude and refined oils were put into storage. In the first 11 months of 1926, 28,318,000 barrels were withdrawn from storage to meet domestic and export demand. Crude oil production in the 11 months of 1927 totaled 820,327,000 barrels in the United States, or 122,079,000 barrels more than in the corresponding time of 1926. Imports of crude oil fell only 3,448,000 barrels in 11 months of 1927 under 1926 imports, to 51,947,000 barrels. The total new supply of crude in 11 months of 1927 was 872,274,000 barrels, compared with 753,644,000 barrels in the first 11 months of 1926. With benzol and natural gasoline the total supply of new material for the manufacture of motor fuel and other petroleum products was 909,864,000 barrels and with imported refined oils the grand total new supply of petroleum was 922,461,000 barrels. Total demand was only 859,909,000 barrels, leaving an excess of 62,552,000 barrels.

In the first 11 months of 1926 the grand total new supply was 804,405,000 barrels and demand 832,725,000 barrels.

Average demand for all oils in the first 11 months of 1927 was 2,575,000 barrels a day, compared with 2,493,000 barrels in 1926, a gain of only 3.36 per cent in 1927. In the 11 months of 1927 exports of crude, 14,126,000 barrels, totaled only 2,000 barrels more than in the corresponding months of 1926. Exports of all refined oils increased 9,981,000 barrels to 115,833,000 barrels, a gain of 9.42 per cent.

Daily average crude oil production

Petroleum Supply and Demand — Barrels

	Nov. 1927	Oct. 1927	Sept. 1927	Nov. 1926
Domestic crude production: Light	65,378,000	68,037,000	66,247,000	57,720,000
Heavy	8,400,000	9,044,000	8,834,000	12,171,000
Imports of crude oil	5,339,000	4,633,000	5,122,000	5,043,000
Imports of refined oil	1,159,000	1,041,000	868,000	1,619,000
Natural gasoline	3,410,000	3,419,000	3,245,000	2,967,000
Benzol	205,000	217,000	210,000	179,000
Total new supply all oils	83,891,000	86,391,000	84,526,000	79,699,000
Total stocks end of preceding month	577,427,000	573,379,000	572,245,000	515,622,000
Total supply of all oils	661,318,000	659,770,000	656,771,000	598,320,000
Exports of crude oil	1,280,000	1,539,000	1,297,000	1,344,000
Exports of refined oil	10,641,000	11,458,000	9,649,000	11,964,000
Domestic demand, crude and refined	66,748,000	69,346,000	72,446,000	65,470,000
Total demand	78,669,000	82,343,000	83,392,000	78,778,000
Total stocks of all oils end of month	582,649,000	577,427,000	573,379,000	516,543,000
Day's supply	222.2	217.4	206.2	196.7
Increase in stocks	5,222,000	4,048,000	1,134,000	921,042
Daily average new supply	2,796,000	2,787,000	2,818,000	2,657,000
Daily average demand	2,622,000	2,656,000	2,780,000	2,626,000
Daily average excess of supply	174,000	131,000	38,000	31,000
Crude stocks:				
East of California: Light	300,475,000	297,263,000	291,581,000	223,828,000
Heavy	48,410,000	48,094,000	48,160,000	53,321,000
In California: Light	21,191,000	21,609,000	22,795,000	30,051,000
Heavy	92,555,000	91,858,000	92,186,000	87,440,000
Total stocks of crude	462,631,000	458,824,000	454,722,000	394,640,000
Total stocks of refined	119,198,000	117,822,000	117,921,000	121,441,000
Stocks of natural gasoline	820,000	781,000	736,000	462,000

in Oklahoma was 789,600 barrels in November, a decline of 10,700 barrels from the October daily average. November was the first month since June that Oklahoma production averaged less than 800,000 barrels a day.

Production in Texas outside the Gulf Coastal region averaged 486,700 barrels a day, compared with 487,500 barrels a day in October, a decline of only 800 barrels in the average although a large majority of the Yates pool production was shut in.

California production declined 10,200 barrels daily average to 617,400 barrels daily. Arkansas production was down 4,700 barrels daily average to 97,400 barrels daily. This was the first time in several years that Arkansas production has averaged less than 100,000 barrels a day. Wyoming production averaged 2,300 barrels more and Kansas 1,800 barrels more. In other fields there were only small changes.

Production in the first 11 months of 1927 averaged 2,456,000 barrels daily, compared with 2,090,000 barrels in the first 11 months of 1926.

Only three fields produced less in 1927 than in 1926. These three are the Rocky Mountain, Lima-Indiana, and southwestern Indiana-Illinois. The Appalachian field for the first time in several years produced more crude than the Rocky Mountain fields, the margin in the 11 months having been 297,000 barrels.

The Mid-Continent in 11 months of 1927 produced 497,843,000 barrels of crude, an increase of 114,911,000 bar-

(*Continued on Page* 74)

Crude Oil Stocks—By Months

(Thousands of Barrels)

1926	East of Calif.	†In Calif.	Total U. S.
January	291,400	130,841	422,241
February	287,975	131,638	419,613
March	287,710	131,678	419,388
April	286,208	124,290	410,498
May	284,009	125,359	409,368
June	281,482	122,794	404,583
July	278,184	121,344	399,528
August	277,486	119,893	397,379
September	277,771	117,964	395,735
October	277,014	117,928	394,942
November	277,099	117,497	394,596
December	278,077	118,131	396,208
1927			
January	278,972	118,988	397,673
February	285,458	117,410	402,868
March	290,110	117,454	407,564
April	297,895	117,843	415,738
May	307,016	117,432	424,448
June	315,702	117,414	433,116
July	324,930	116,996	441,926
August	333,673	115,227	448,900
September	339,741	114,981	454,722
October	345,357	113,467	458,824
November	348,885	113,746	462,631

†Includes heavy fuels.

Crude Production—Barrels

(Daily Averages)

States	Nov. 1927	Oct. 1927	Nov. 1926
Arkansas	97,400	102,100	142,500
California	617,200	627,400	639,100
Colorado	7,300	7,000	7,700
Illinois	18,700	17,900	20,600
Indiana	2,400	2,400	2,100
Kansas	108,700	106,900	114,900
Kentucky	19,600	19,000	17,400
Louisiana Inland	46,300	48,700	61,100
Gulf Coast	8,200	7,600	9,800
Michigan	1,100	1,200	700
Montana	12,000	13,000	16,100
New Mexico	2,600	2,100	5,300
New York	6,200	6,100	5,300
Ohio	19,700	20,100	19,600
Oklahoma	789,600	800,300	561,800
Pennsylvania	26,700	26,700	25,300
Tennessee	200	200	100
Texas Inland	486,700	487,500	438,300
Gulf Coast	118,500	122,200	156,600
West Virginia	15,900	16,100	16,400
Wyoming	54,300	52,000	59,600
Total U. S.	2,459,300	2,486,500	2,310,500

Stocks of Crude Oil

DOMESTIC UNLESS OTHERWISE SPECIFIED. AMOUNTS IN THOUSANDS OF BARRELS

At Refineries

Districts	Nov. 1927	Oct. 1927	Nov. 1926
East Coast:			
Domestic	8,045	8,772	7,913
Foreign	2,726	2,675	2,350
Appalachian	1,822	1,740	1,664
Indiana, Illinois, etc.	2,692	2,737	2,058
Oklahoma, Kans., etc.	4,924	4,850	2,548
Texas: Inland	1,656	1,677	952
Texas Gulf Coast			
Domestic	7,653	7,473	7,903
Foreign	204	174	206
Ark. and inland La.	457	402	638
Louisiana Gulf Coast			
Domestic	6,104	5,643	7,067
Foreign	1,150	1,043	761
Rocky Mountain	1,394	1,368	1,501
U. S. east of Calif.	38,827	38,554	35,565

AT TANK FARMS, IN PIPE LINES AND ELSEWHERE THAN REFINERIES

Appalachian	6,501	6,552	6,577
Kentucky	1,090	1,081	1,090
Lima-Indiana	1,109	1,077	689
Ill., S. W. Indiana	12,189	12,100	11,731
Okla., Kans., Tex. except coastal	218,378	214,707	140,925
N. La.-Ark	25,577	25,628	32,376
Gulf Coast	17,619	17,679	18,965
Rocky Mountain	27,256	27,681	28,571
East of Calif. pipe line tank farm stocks	309,719	306,505	240,924
Foreign crude			
Atlantic ports	106	100	105
Gulf ports	233	198	555
Total refinery, pipe line and tank farm stocks, east of Calif.	348,885	345,357	277,149
California:			
20° and lighter	21,191	21,609	30,051
Heavier than 20°	92,555	91,858	87,440
GRAND TOTAL	462,631	458,824	394,640

CLASSIFICATION BY GRAVITY

(Elsewhere than refineries east of California)

24° lighter	300,475	297,263	223,828
Heavier than 24°	48,410	48,094	53,321

Crude Oil Production by Fields—Barrels

Fields	November Daily Avg. 1927	October Daily Avg. 1927	November Daily Avg. 1926	Total Jan.-Nov. 1927	Total Jan.-Nov. 1926
Appalachian	84,200	83,500	79,500	28,017,000	26,125,000
Lima-Indiana	4,400	5,000	4,900	1,704,000	1,874,000
Michigan	1,100	1,200	700	402,900	68,000
Ill., S. W. Indiana	20,800	20,000	22,400	7,156,000	7,728,000
Mid-Continent	1,528,700	1,545,500	1,308,800	497,843,000	382,932,000
Gulf Coast	126,700	129,800	166,400	45,572,000	39,901,000
Rocky Mountain	76,200	74,100	88,700	27,720,000	35,343,000
California	617,200	627,400	639,100	211,813,000	204,278,000
U. S. Total	2,459,300	2,486,500	2,310,500	820,327,000	698,249,000

Gasoline Situation by Districts — Barrels

DISTRICTS	November Daily Avg. Output	October Daily Avg. Output	November Change %	November Daily Avg. Shipments	October Daily Avg. Shipments	November Change %	Stocks Nov. 30, 1927	Stocks Oct. 31, 1927	Stocks Nov. 30, 1926	DISTRICTS
East Coast	139,967	138,451	+ 1.10	137,600	140,322	— 1.94	4,561,000	4,490,000	6,478,000	East Coast
Appalachian	35,833	35,806	+ 0.08	36,667	35,065	+ 4.57	822,000	847,000	749,000	Appalachian
Ind., Ill., etc.	135,033	123,226	+ 9.58	134,167	134,355	— 0.14	3,251,000	3,225,000	3,823,000	Ind., Ill., etc.
Okla., Kans., etc.	152,500	159,258	— 4.24	146,133	142,935	+ 2.24	2,528,000	2,337,000	2,696,000	Okla., Kans.
Texas	207,767	195,613	+ 6.21	187,233	194,806	— 3.89	4,625,000	4,009,000	4,519,000	Texas
La. and Ark.	66,467	71,000	— 6.38	66,767	77,000	—13.28	1,424,000	1,433,000	3,328,000	La. and Ark.
Rocky Mount.	40,300	35,613	—13.16	42,700	53,774	—20.59	1,336,000	1,408,000	3,764,000	Rocky Mount.
California	174,067	173,387	+ 0.39	172,300	160,161	+ 7.58	11,854,000	11,801,000	10,559,000	California
U. S. Total	951,933	932,354	+ 2.10	923,567	938,418	— 1.58	30,401,000	29,550,000	35,916,000	U. S. Total
Tex. Gulf Coast	163,900	154,484	+ 6.10	145,000	153,742	— 5.69	3,925,000	3,358,000	4,149,000	Tex Gulf Coast
La. Gulf Coast	53,300	56,129	— 5.04	52,200	63,193	—17.40	1,332,000	1,299,000	3,258,000	La. Gulf Coast

Kerosene Situation by Districts — Barrels

DISTRICTS	November Daily Avg. Output	October Daily Avg. Output	November Change %	November Daily Avg. Shipments	October Daily Avg. Shipments	November Change %	Stocks Nov. 30, 1927	Stocks Oct. 31, 1927	Stocks Nov. 30, 1926	DISTRICTS
East Coast	31,233	29,516	+ 5.82	25,967	43,677	—40.55	1,557,000	1,399,000	1,507,000	East Coast
Appalachian	9,700	10,387	— 6.61	9,633	10,742	—10.32	300,000	298,000	303,000	Appalachian
Ind., Ill., etc.	15,133	14,290	+ 5.90	12,633	12,774	— 1.10	932,000	857,000	680,000	Ind., Ill., etc.
Okla., Kans., etc.	25,800	26,968	+ 4.33	23,033	32,645	—29.44	540,000	457,000	632,000	Okla., Kans.
Texas	41,100	42,871	— 4.13	39,100	46,710	—16.29	1,521,000	1,461,000	1,670,000	Texas
La. and Ark.	17,367	14,452	+20.17	16,400	18,000	— 8.89	890,000	861,000	1,240,000	La. and Ark.
Rocky Mount.	5,933	5,193	+14.25	2,967	4,226	—29.79	266,000	177,000	362,000	Rocky Mount.
California	14,533	13,871	+ 4.77	13,867	14,419	— 3.83	1,835,000	1,815,000	1,676,000	California
U. S. Total	160,800	157,548	+ 2.06	143,600	183,193	—21.61	7,841,000	7,325,000	8,070,000	U. S. Total
Tex. Gulf Coast	33,500	35,516	— 5.68	30,933	38,677	—20.02	1,415,000	1,338,000	1,210,000	Tex Gulf Coast
La. Gulf Coast	15,367	12,903	+19.10	14,767	16,097	— 8.26	866,000	848,000	1,228,000	La. Gulf Coast

Natural Gasoline and Motor Blends — Barrels

DISTRICTS	Daily Avg. Production Nov. (net)	Daily Avg. Production Oct. (net)	Stocks End of November	Stocks End of October	Motor Fuel Blends Made in Nov.	Motor Fuel Blends Made in Oct.	Stocks of Blends End of Nov.	Stocks of Blends End of Oct.	DISTRICTS
Appalachian	6,587	5,683	69,476	66,976	6,452	9,500	5,881	6,119	Appalachian
Ind., Ill., etc.	1,110	1,074	7,000	6,571	833	809	333	357	Ind., Ill., etc.
Okla., Kans., etc.	42,619	40,706	423,191	408,857	112,405	114,952	17,286	14,667	Okla., Kans., etc.
Texas	21,825	21,198	248,143	228,929	20,286	27,286	2,786	3,286	Texas
Louisiana and Ark.	5,317	5,298	31,286	24,071	13,452	11,024	1,071	500	Louisiana and Ark.
Rocky Mountain	3,095	2,918	11,167	13,690	2,668	2,690	2,548	2,643	Rocky Mountain
Total east of Calif.	80,555	76,881	790,262	749,095	156,096	166,261	29,905	27,572	Total east of Calif.
California	33,095	33,410	29,738	31,786	.....	.....	213	214	California
U. S. Total	113,650	110,291	820,000	780,881	.....	.....	30,118	27,786	U. S. Tota

Lubricants Situation by Districts — Barrels

DISTRICTS	November Daily Avg. Output	October Daily Avg. Output	November Change %	November Daily Avg. Shipments	October Daily Avg. Shipments	November Change %	Stocks Nov. 1927	Stocks Oct. 1927	Stocks Nov. 1926	DISTRICTS
East Coast	22,267	30,484	—26.96	27,800	27,452	+ 1.27	2,522,000	2,588,000	2,769,000	East Coast
Appalachian	12,567	13,484	— 6.80	11,567	11,968	— 3.35	1,063,000	1,033,000	1,015,000	Appalachian
Ind., Ill., etc.	10,467	9,355	+11.89	7,967	8,387	— 5.01	780,000	705,000	661,000	Ind., Ill., etc.
Okla., Kans., etc.	6,767	6,354	+ 6.50	5,133	5,161	— 0.55	471,000	422,000	417,000	Okla., Kans.
Texas	20,100	20,516	— 2.03	22,433	22,096	+ 1.53	1,622,000	1,692,000	1,621,000	Texas
La. and Ark.	1,600	1,161	+37.81	1,533	839	+82.72	101,000	99,000	104,000	La. and Ark.
Rocky Mount.	1,500	1,613	— 7.00	1,333	1,484	—10.17	112,000	107,000	149,000	Rocky Mount.
California	7,300	5,968	+22.32	6,800	7,129	— 4.61	853,000	838,000	884,000	California
U. S. Total	82,567	88,935	— 7.16	84,566	84,516	+ 0.06	7,524,000	7,584,000	7,620,000	U. S. Total
Tex. Gulf Coast	18,933	19,452	— 2.67	21,233	21,387	— 0.72	1,570,000	1,639,000	1,583,000	Tex Gulf Coast
La. Gulf Coast	1,600	1,161	+37.81	1,500	871	+72.22	101,000	98,000	104,000	La. Gulf Coast

Gas and Fuel Oil Situation by Districts — Barrels

DISTRICTS	November Daily Avg. Output	October Daily Avg. Output	November Change %	November Daily Avg. Shipments	October Daily Avg. Shipments	November Change %	Stocks Nov. 1927	Stocks Oct. 1927	Stocks Nov. 1926	DISTRICTS
East Coast	227,733	221,871	+ 2.64	219,802	223,968	— 1.86	10,804,000	10,566,000	7,035,000	East Coast
Appalachian	18,267	22,581	—19.10	19,767	17,097	+15.62	1,065,000	1,110,000	750,000	Appalachian
Ind., Ill., etc.	61,900	62,129	— 0.37	65,867	56,935	+15.69	1,938,000	2,057,000	1,295,000	Ind., Ill., etc.
Okla., Kans., etc.	91,100	93,677	— 2.75	92,967	82,968	+12.05	6,066,000	6,122,000	5,485,000	Okla., Kans.
Texas	207,833	206,258	+ 0.76	198,200	178,903	+10.79	9,686,000	9,397,000	8,557,000	Texas
La. and Ark.	75,000	80,355	— 6.66	71,300	75,290	— 5.30	3,419,000	3,308,000	2,419,000	La. and Ark.
Rocky Mount.	21,467	20,161	+ 6.48	20,533	21,548	— 4.71	659,000	631,000	1,318,000	Rocky Mount.
California	383,167	391,193	— 2.05	.....	.....	.....	.....	.....	.....	California
U. S. Total	1,086,467	1,098,226	— 1.07	1,071,600	1,047,902	+ 2.26	33,637,000	33,191,000	26,859,000	U. S. Total
Tex. Gulf Coast	155,000	160,581	— 3.48	147,000	135,710	— 8.32	8,007,000	7,767,000	7,578,000	Tex. Gulf Coast
La. Gulf Coast	40,168	46,516	—13.65	37,133	41,032	— 9.50	2,849,000	2,758,000	1,671,000	La. Gulf Coast

Coke, Asphalt, Miscellaneous Products

	Coke Output (Tons)	Coke Stocks (Tons)	Asphalt Output (Tons)	Asphalt Stocks (Tons)	Miscel. Products Output (Bbls.)	Miscel. Products Stocks (Bbls.)	Unfin. Oil Output (Bbls.)	Unfin. Oil Stocks (Bbls.)	Losses (Bbls.)	
January, 1926	73,701	230,566	162,383	174,564	491,652	1,063,619	2,097,000	37,880,000	1,995,000	January, 1926
February	64,105	210,247	152,468	182,063	481,428	1,073,238	2,340,500	28,808,000	1,767,000	February
March	80,689	219,820	210,596	195,052	597,810	1,217,119	2,195,928	39,098,000	2,059,000	March
April	76,031	216,163	198,598	239,953	572,381	1,138,095	2,481,952	38,785,000	1,982,000	April
May	79,982	234,025	248,390	229,819	779,310	1,210,428	2,756,024	38,681,000	2,270,000	May
June	81,326	246,707	300,970	200,881	784,476	1,010,381	2,767,000	40,081,000	2,308,000	June
July	83,358	260,727	281,196	184,853	800,310	897,452	2,927,214	38,527,000	2,419,000	July
August	89,100	277,668	305,944	200,175	733,000	858,000	2,848,000	39,822,000	2,605,000	August
September	95,111	287,546	308,572	188,512	749,000	835,000	2,721,000	39,500,000	2,492,000	September
October	87,946	287,354	323,348	187,845	738,000	863,000	2,790,000	40,006,000	2,437,000	October
November	91,459	285,905	215,973	166,788	661,000	1,030,000	2,455,000	38,770,000	2,267,000	November
December	92,500	290,582	213,697	193,331	644,000	1,100,000	2,399,000	38,829,000	2,288,000	December
1926, Total	995,308	.....	2,922,788	.....	8,030,000	.....	31,240,000	.....	26,928,000	1926, Total
January, 1927	92,914	287,394	191,180	215,337	511,000	1,189,000	2,473,000	39,287,000	2,367,000	January, 1927
February	88,102	294,682	172,685	234,450	546,000	1,282,000	2,729,000	38,986,000	2,091,000	February
March	98,163	325,521	222,309	235,251	525,000	1,356,000	2,412,000	39,392,000	2,369,000	March
April	88,404	318,529	273,767	219,502	561,000	1,410,000	1,978,000	38,095,000	2,237,000	April
May	87,900	329,400	319,000	222,500	599,000	1,368,000	1,809,000	37,760,000	2,599,000	May
June	95,300	293,100	347,100	232,400	677,000	1,180,000	2,283,000	38,192,000	2,487,000	June
July	90,400	305,800	334,700	214,100	747,000	928,000	2,490,000	39,647,000	2,516,000	July
August	94,800	303,600	339,500	192,200	743,000	879,000	1,955,000	38,711,000	2,598,000	August
September	97,500	313,500	333,100	176,300	634,000	863,000	1,811,000	36,962,000	2,453,000	September
October	101,600	331,300	332,600	189,400	663,000	960,000	1,977,000	35,874,000	2,405,000	October
November	102,300	349,200	290,000	196,200	606,000	1,120,000	2,121,000	35,209,000	2,145,000	November

Daily Average Runs to Stills—All Oils—Barrels

	East Coast	Appala.	Ind.-Ill.	Okla.-Kans.	Texas	La.-Ark.	Rocky Mt.	Calif.	Total U. S.	
January, 1926	334,742	73,516	185,709	261,903	426,129	196,484	87,548	558,097	2,120,900	January, 1926
February	360,036	78,428	192,964	256,857	434,674	200,357	96,250	549,821	2,169,400	February
March	369,032	74,677	187,419	250,742	422,774	203,839	98,355	563,228	2,176,500	March
April	365,400	77,133	203.033	266,000	451,667	205,867	98,733	557,900	2,225,200	April
May	373,516	81,677	211,065	293,903	431,451	199,161	101,322	588,613	2,280,700	May
June	382,800	85,433	211,467	293,267	446,867	207,433	107,033	574,033	2,308,300	June
July	418.742	83,097	210,193	292,645	448,516	206,839	102,355	575,193	2,337,600	July
August	395,935	87,613	208,677	300,484	446,484	211.129	106,903	599,645	2,356,900	August
September	404,600	86,667	212,300	300,167	452,900	213,000	109,333	607,867	2,386,833	September
October	427,935	87,645	208,710	279,645	482,935	210,612	113,323	587,645	2,398,500	October
November	462,200	86,567	214,600	288,800	480,466	209,033	108,566	585,633	2,435,866	November
December	442,968	84,838	209,355	284,516	516,354	226,903	102,613	589,322	2,456,870	December
January, 1927	408,355	82,581	206,226	278,258	517,160	228,516	103,161	616,516	2,440,774	January, 1927
February	412,714	86,928	197,785	295,964	504,642	228,107	103,321	633,108	2,462,571	February
March	439,387	83,097	209,161	283,548	479,806	224,903	103,290	597,839	2,421,032	March
April	411,367	84,400	204,067	286,067	491,567	224,400	100,500	615,333	2,417,701	April
May	413,516	82,000	226,677	293,581	494,806	212.129	75,839	618,452	2,417,000	May
June	429,967	85,400	238,067	301,733	490,633	199,933	87,300	605,733	2,438,766	June
July	439,871	80,935	250,387	317,129	482,839	199,194	87,226	633,032	2,490,613	July
August	465,839	86,065	237,194	319,516	481,032	202,226	76,032	618,516	2,486,420	August
September	453,000	87,100	225,667	327,300	483,900	211,600	71,700	637,467	2,497,733	September
October	475,580	91,161	229,677	307,774	513,419	204,968	80,871	617,937	2,521,387	October
November	471,667	84,200	246,100	298,667	515.533	197,900	89,800	619,733	2,523,600	November

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(2) Speed and Ease of Operation
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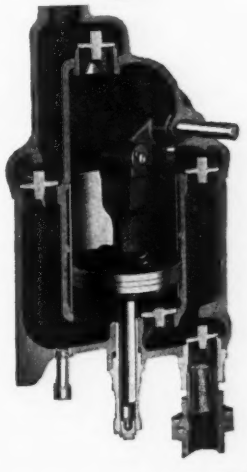

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(*Continued from Page* 71)

rels or 30 per cent more than the same period in 1926. California production, totaling 211,813,000 barrels, was 7,535,000 barrels or 3.68 per cent more than in the first 11 months of 1926. The total U. S. production in 11 months of 1927 was 122,078,000 barrels or 17.48 per cent more than 1926 production in the corresponding time.

Stocks of crude oil at refineries east of California increased only 273,000 barrels in November. Tank farm and pipe line stocks increased 3,214,000 barrels. Stocks of foreign crude at Atlantic and Gulf ports increased 41,000 barrels. In California stocks of light, refinable crude were lowered 418,000 barrels but stocks of heavy crude rose 697,000 barrels, making a net gain of 656,000 barrels in California. Total stocks of crude have increased for 13 consecutive months.

Crude oil charges to stills were less in November than in October in the East Coast, Appalachian, Oklahoma-Kansas and Louisiana-Arkansas districts. However, the East Coast runs averaged the second largest in the history at Atlantic seaboard refineries, 471,667 barrels daily. This volume was almost 4,000 barrels less than the average October runs. Appalachian district runs were the smallest since July. Oklahoma-Kansas district runs were the lowest since May. Louisiana-Arkansas average runs, 197,900 barrels daily, were the smallest since January, 1926.

On the other side of the picture, runs of Indiana-Illinois refineries were the largest on record, 246,100 barrels daily average. Runs at Texas refineries were the largest since January, 1926, and in the Rocky Mountain region the largest since last April. California refineries in November ran more crude than in October but less than in September.

Gasoline production was 19,579 barrels, daily average, more in November than in October, or 2.1 per cent. Production was curtailed in only the Oklahoma-Kansas and Louisiana-Arkansas districts. Gulf Coast refineries contributed most of the increase in the Texas district, which led the various districts in increased production. The Indiana-Illinois district was second.

Gasoline shipments were larger than October shipments from only the Appalachian, Oklahoma-Kansas and California districts. Stocks were lowered in only the Appalachian, Louisiana-Arkansas and Rocky Mountain districts. Compared with gasoline stocks Nov. 30, 1926, stocks Nov. 30, 1927 were lower in the East Coast, Indiana-Illinois, Oklahoma-Kansas, Louisiana-Arkansas, and Rocky Mountain districts.

Natural gasoline production was increased from 76,881 barrels a day in October to 80,555 barrels a day in November east of California. In California daily average output fell from 33,410 barrels in October to 33,095 barrels in November. Stocks east of California rose from 749,095 barrels Oct. 31 to 790,262 barrels Nov. 30. Stocks in California were lowered by 2,000 barrels.

Although production of natural gasoline motor fuel blends was less in November than in October stocks in-

Kerosene, Lubes, Wax, Fuel and Gas Oils

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
KEROSENE (Bbls.)					
January, 1926	5,122,000	.....	1,871,000	3,521,000	6,851,000
February	4,746,000	1,000	1,577,000	3,166,000	6,855,000
March	5,516,000	1,000	1,876,000	3,492,000	7,004,000
April	5,037,000	1,000	1,760,000	3,268,000	7,014,000
May	5,210,000	4,000	1,623,000	3,227,000	7,378,000
June	5,009,000	3,000	1,601,000	2,908,000	7,881,000
July	4,877,000	21,000	1,612,000	2,733,000	8,434,000
August	5,162,000	20,000	2,689,000	2,731,000	8,196,000
September	5,207,000	21,000	1,843,000	3,419,000	8,162,000
October	5,126,000	3,000	1,818,000	3,235,000	8,238,000
November	5,357,000	.....	1,943,000	3,592,000	8,060,000
December	5,399,000	.....	1,847,000	3,037,000	8,575,000
1926 Total	61,768,000	75,000	22,060,000	38,329,000	.....
January, 1927	5,113,000	.....	1,616,000	3,882,000	8,190,000
February	4,453,000	1,000	1,399,000	2,590,000	8,655,000
March	4,802,000	3,000	1,351,000	3,356,000	8,759,000
April	4,608,000	1,000	1,861,000	2,776,000	8,725,000
May	4,663,000	1,000	1,633,000	3,188,000	8,568,000
June	4,308,000	2,000	1,616,000	2,695,000	8,567,000
July	4,484,000	.....	1,376,000	2,637,000	9,038,000
August	4,420,000	4,000	1,700,000	3,389,000	8,373,000
September	4,686,000	.....	1,659,000	3,280,000	8,120,000
October	4,884,000	1,000	2,211,000	3,469,000	7,325,000
November	4,824,000	27,000	1,821,000	2,514,000	7,841,000
LUBRICANTS (Bbls.)					
January, 1926	2,648,000	2,000	727,000	1,632,000	7,544,000
February	2,448,000	1,000	789,000	1,294,000	7,910,000
March	2,646,000	4,000	740,000	2,180,000	7,640,000
April	2,692,000	3,000	928,000	2,039,000	7,368,000
May	2,863,000	11,000	717,000	1,869,000	7,656,000
June	2,681,000	3,000	984,000	2,042,000	7,314,000
July	2,831,000	1,000	747,000	2,071,000	7,328,000
August	2,648,000	2,000	660,000	2,092,000	7,226,000
September	2,645,000	2,000	705,000	2,019,000	7,149,000
October	2,768,000	2,000	704,000	1,778,000	7,437,000
November	2,724,000	1,000	820,000	1,722,000	7,620,000
December	2,699,000	1,000	917,000	1,827,000	7,576,000
1926 Total	32,293,000	33,000	9,438,000	22,565,000	.....
January, 1927	2,570,000	81,000	864,000	1,496,000	7,867,000
February	2,345,000	.....	620,000	1,231,000	8,361,000
March	2,754,000	149,000	895,000	2,334,000	8,035,000
April	2,615,000	1,000	763,000	1,712,000	8,176,000
May	2,625,000	1,000	863,000	1,928,000	8,011,000
June	2,571,000	1,000	758,000	2,197,000	7,628,000
July	2,672,000	.....	993,000	1,811,000	7,496,000
August	2,752,000	1,000	754,000	2,004,000	7,491,000
September	2,782,000	.....	861,000	1,965,000	7,447,000
October	2,757,000	1,000	839,000	1,782,000	7,584,000
November	2,477,000	.....	798,000	1,739,000	7,524,000
WAX (Pounds)					
January, 1926	53,015,000	632,000	29,061,000	18,204,000	122,773,000
February	50,307,000	668,000	28,709,000	21,075,000	123,964,000
March	55,714,000	456,000	25,005,000	24,788,000	130,341,000
April	55,371,000	647,000	31,560,000	18,715,000	136,084,000
May	56,135,000	213,000	23,968,000	19,068,000	149,396,000
June	50,673,000	833,000	27,300,000	18,348,000	155,254,000
July	54,267,000	2,089,000	30,768,000	24,138,000	156,704,000
August	54,441,000	968,000	26,906,000	20,142,000	165,065,000
September	49,228,000	252,000	29,303,000	25,463,000	159,779,000
October	56,011,000	1,384,000	28,365,000	20,884,000	167,925,000
November	54,678,000	674,000	25,164,000	21,059,000	177,054,000
December	55,950,000	1,189,000	28,410,000	20,452,000	185,331,000
1926 Total	645,790,000	10,005,000	334,519,000	252,336,000	.....
January, 1927	54,114,000	460,000	29,228,000	17,842,000	192,835,000
February	47,363,000	2,048,000	23,623,000	20,171,000	198,452,000
March	53,644,000	910,000	28,205,000	23,461,000	201,340,000
April	48,917,000	1,505,000	25,421,000	15,322,000	211,019,000
May	46,267,000	729,000	25,228,000	25,458,000	207,329,000
June	44,938,000	400,000	24,200,000	29,659,000	198,808,000
July	47,979,000	2,789,000	25,970,000	32,105,000	191,501,000
August	41,576,000	2,656,000	34,229,000	20,859,000	180,645,000
September	47,888,000	3,040,000	31,780,000	29,621,000	170,172,000
October	49,476,000	887,000	28,342,000	21,826,000	170,367,000
November	48,146,000	3,132,000	32,541,000	17,404,000	171,700,000
GAS and FUEL OILS (Bbls.)					
January, 1926	28,981,000	863,000	3,612,000	.....	*23,266,000
February	27,094,000	1,585,000	3,190,000	.....	*21,445,000
March	29,824,000	947,000	2,345,000	.....	*20,037,000
April	29,029,000	1,148,000	3,475,000	.....	*19,788,000
May	30,380,000	1,368,000	2,735,000	.....	*20,858,000
June	29,130,000	1,856,000	3,370,000	.....	*22,554,000
July	31,461,000	1,485,000	2,427,000	.....	*25,696,000
August	31,154,000	1,629,000	3,582,000	.....	*26,500,000
September	30,698,000	817,000	2,750,000	.....	*27,151,000
October	32,444,000	857,000	2,015,000	.....	*26,376,000
November	31,624,000	1,111,000	5,020,000	.....	*26,859,000
December	33,376,000	764,000	3,830,000	.....	*24,898,000
1926 Total	365,195,000	14,430,000	38,351,000	.....	.....
January, 1927	32,936,000	660,000	3,732,000	.....	*23,195,000
February	30,185,000	1,053,000	3,812,000	.....	*22,099,000
March	32,377,000	525,000	3,657,000	.....	*22,561,000
April	31,856,000	805,000	3,325,000	.....	*23,732,000
May	33,499,000	826,000	4,544,000	.....	*26,059,000
June	31,691,000	851,000	4,278,000	.....	*26,590,000
July	33,693,000	849,000	4,047,000	.....	*28,890,000
August	34,098,000	391,000	4,639,000	.....	*30,346,000
September	32,339,000	341,000	3,258,000	.....	*31,631,000
October	34,045,000	667,000	4,206,000	.....	*33,191,000
November	32,594,000	704,000	4,013,000	.....	*33,637,000

*These stocks for east of California only.

Gasoline Demand and Supply—Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1926	23,208,000	384,000	3,361,000	17,582,000	41,524,000
February	21,259,000	408,000	3,245,000	15,814,000	44,132,000
March	23,868,000	517,000	3,094,000	19,302,000	46,121,000
April	24,296,000	454,000	4,256,000	20,848,000	45,767,000
May	25,271,000	621,000	4,530,000	24,213,000	42,916,000
June	24,946,000	464,000	3,744,000	23,803,000	40,779,000
July	25,504,000	460,000	3,702,000	24,752,000	38,289,000
August	25,942,000	674,000	3,572,000	26,912,000	34,421,000
September	25,360,000	258,000	3,853,000	22,929,000	33,257,000
October	26,337,000	874,000	2,783,000	23,973,000	33,712,000
November	26,245,000	486,000	3,920,000	20,618,000	35,905,000
December	27,498,000	452,000	3,413,000	21,419,000	39,023,000
1926 Total	299,734,000	6,052,000	43,473,000	262,165,000	.....
January, 1927	27,960,000	520,000	3,557,000	17,888,000	46,058,000
February	25,024,000	416,000	3,544,000	18,240,000	49,714,000
March	27,886,000	493,000	3,219,000	22,646,000	52,410,000
April	26,577,000	377,000	3,614,000	23,371,000	52,379,000
May	26,787,000	490,000	4,468,000	26,579,000	48,609,000
June	26,616,000	590,000	4,248 000	27,799,000	43,768,000
July	28,118,000	190,000	3,223,000	29,784,000	39,069,000
August	28,010,000	348,000	4,193,000	29,779,000	33,455,000
September	27,716,000	515,000	3,539,000	28,409,000	29,738,000
October	28,903,000	365,000	3,959,000	25,497,000	29,550,000
November	28,558,000	417,000	3,724,000	24,400,000	30,401,000

creased more than 2,000 barrels.

In the first 11 months of 1927 output of gasoline at refineries totaled 302,155,000 barrels, an increase of 29,919,000 barrels, or 11 per cent over production in the first 11 months of 1926. Domestic demand totaled 274,210,000 barrels in 11 months, a gain of 33,816,000 barrels or 14 per cent in 1927 over 1926. Imports of gasoline were 4,721,000 barrels in the 11 months of 1927, a decline of 367,000 barrels or 7.3 per cent from 1926 imports. Exports totaled 41,288,000 barrels in 1927, a gain of 1,388,000 barrels or 3.47 per cent over exports in the first 11 months of 1926. Stocks of gasoline at refineries Nov. 30 were 5,504,000 barrels less than on Nov. 30, 1926, or 15.33 per cent.

Of the November, 1927, gasoline production at refineries, 58 per cent was straight run, 32 per cent cracked and 10 per cent natural gasoline. There was a gain of 1 point in the output of cracked gasoline and a decrease of 1 point in straight run, compared with October proportions. The Indiana-Illinois district continues to lead the country in proportion of cracked gasoline produced although Texas has the lead in volume, with Indiana-Illinois, East Coast, and Oklahoma-Kansas districts next in order. Louisiana-Arkansas and California plants were the largest users of natural gasolines, 21 per cent of the gasoline produced in each district having been casinghead.

Kerosene production was curtailed in only the Appalachian and Texas districts in November as compared with October output. Average shipments were less in November in every district and stocks were increased in every district. October kerosene shipments were 21.61 per cent less in November than in October. Domestic demand was the lowest since June, 1925. Domestic kerosene demand in the first 11 months of 1927 averaged 101,000 barrels a day, compared with 112,000 barrels a day in the corresponding time of 1926. Average exports in 1927 were 55,000 barrels a day compared with 61,000 barrels last year.

Lubricating oil output was curtailed 7.16 per cent in November. Shipments were 0.06 per cent larger than October shipments. Stocks were lowered 60,000 gallons. Domestic lubricating oil demand in the first 11 months of 1927 was 770,000 barrels or 3.7 per cent less in 11 months than in 11 months of 1926. Export demand was 490,000 barrels or 5.7 per cent more. Output was curtailed in 1927 by 674,000 barrels or 2.29 per cent.

Export demand for wax in November was the second largest in 1927. Domestic demand, however, was the smallest since last April. Stocks of wax rose more than a million pounds in November but were lower than a year before. In 11 months export demand was slightly larger last year than the year before and domestic demand was approximately 10 per cent more.

Gas and fuel oil output averaged 1.07 per cent less in November than in October. Average shipments were 2.26 per cent more than in October, but stocks east of California were increased. Because fuel oil stocks in California are lumped with heavy crude oil, consumption statistics are not available.

Yates Field Operators Reaffirm Policy

FORT WORTH, Jan. 14.—Decision to prorate Pecos county crude to pipeline outlets on an acreage apportionment basis for six months from Jan. 1, 1928, was reaffirmed last week at a meeting of Yates field operators in Fort Worth. The operators failed to accept an alternative proposal of Simms Oil Co., Dallas, which embodied a combination of acreage and potential production considerations in reaching a yardstick for pro-rating of runs. A proposal of Simms representatives was adopted by the committee to provide for withdrawal of any producer from the Yates field agreement after giving 60 days written notice. In such contingency the pro-rating committee would be called together to consider causes of dissatisfaction.

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Does anything indicate more clearly that North American service is more than just leasing service? Here is well-rounded, definite and important co-operation that you really should know about. If you ship in tank, refrigerator or Palace poultry cars, we earnestly suggest that you write for full details.

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All elements which go into these exceptional products are refined by this one complete organization, The Freedom Oil Works Company, in its two plants, at Freedom and at Coraopolis, Penna.

At Freedom, is refined the wonderful 100% Pennsylvania Crude Neutrals which are used *exclusively*.

At Coraopolis, is refined the exceptional 450 Bright Stock (Sharples Process) which also is used *exclusively*.

Then the two are blended to high specifications by this 48 year old organization — you get a complete line of oils, consequently, that attracts business and HOLDS it.

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100% Pennsylvania Motor Oils, *blended to your own Specifications*, from Freedom 450 Bright Stock and Freedom 100% Pennsylvania Crude Neutrals.

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600 Steam Refined
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650 Steam Refined

Freedom 300 Mineral Seal Oil made to Railroad Specifications.

Freedom Filtered Burning Oils.

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FREEDOM

Magnolia Crude Runs For December

HOUSTON, Jan. 12.—Magnolia Petroleum Company, pipeline department, announces from Dallas headquarters the following crude oil runs for December, which are shown in comparison with November:

	November	December
Hewitt-Graham	132,604.00	138,641.20
Healdton	223,562.39	216,908.75
Cushing	128,980.00	135,297.15
Yale	57,866.22	53,871.72
Duncan	49,447.90	45,483.88
Augusta	44,197.49	43,586.28
Walters-Beaver Creek	8,019.79	7,425.76
Burbank	85.27	87.89
Wekon	1,006,183.51	981,819.22
Seminole	105,408.81	152,516.61
Total Okla.-Kans.	1,756,355.47	1,775,638.46
Archer	45,658.80	42,789.87
Burkburnett	78,189.37	74,409.61
Comanche	19,358.87	19,494.78
Electra	98,137.17	95,412.23
Corsicana heavy	8,972.19	8,017.42
Corsicana light	14,000.54	13,622.09
Henrietta	3,795.78	3,867.03
Iatan		
Luling	382,736.45	381,275.97
Lytton Springs	41,246.29	37,798.82
Mexia-Wortham	38,193.99	34,689.34
Mirando	75,916.43	72,467.15
Olden	10,477.08	10,587.54
Panhandle	153,485.61	153,215.66
Panola	1,348.85	1,001.94
Stephens	9,520.93	9,732.13
Throll	1,233.63	1,223.73
Gulf Coast	1,338.13	1,786.58
Crane-Upton	156,866.62	327,229.29
Glasscock	14,046.14	87,228.36
Winkler		100,932.77
Total Texas	1,154,522.87	1,476,782.31
Haynesville	2,308.97	1,778.23
Bull Bayou	46,141.33	41,476.38
Cotton Valley	34,634.82	32,640.47
Pine Island	34,083.95	47,194.26
Hackberry		22,490.33
Total Louisiana	117,169.07	145,579.67
El Dorado light	27,233.12	34,405.14
East El Dorado	1,817.73	1,956.27
Smackover	104,460.0.19	103,456.93
Total Arkansas	133,511.04	139,818.34
GAND TOTAL	3,161,558.45	3,587,818.78

OKLAHOMA-KANSAS

Report for December		Daily Average
Runs	2,037,196	65,716
Shipments	1,919,704	61,926
Total stock	7,037.436	
TEXAS		
Wichita, Wilbarger, Archer		
Runs	214,331	6,914
Shipments	159,632	5,150
Petrolia		
Runs	3,867	125
Shipments	3,867	125
Eastland, Stephens		
Runs	39,814	1,284
Shipments		

Total stocks, 285,727, North Central Texas Field.

Marland's Engagement Announced

PONCA CITY, Jan. 12.—The engagement of E. W. Marland, president of the Marland Oil Co. and Miss Lyde Marland, was announced recently. They are to be married in Philadelphia sometime within the month at the home of Miss Marland's parents, Mr. and Mrs. George F. Roberts.

Miss Marland is a niece of the late Mrs. E. W. Marland whose sister was Mrs. Roberts. She was adopted and given the Marland name in 1916. She is 28 years old; Mr. Marland is 53.

His Rules Are Few but Contractor Hudson Seldom Loses a Hole

By John Power
N. P. N. STAFF WRITER

ARDMORE, Jan. 13 J. HUMPHREY HUDSON, head of the J. H. Hudson Drilling Co. has set a mark for the boys to shoot at in the completing of holes he has contracted to drill. During Mr. Hudson's 20 years of experience in the oil fields he has drilled, either as driller or contractor, nearly 575 wells, and until this past summer, he had never lost a hole.

Many persons, in thinking of the work in the oil country, take into consideration such obstacles as bad weather, roads and the like, but entirely overlook the most persistent foe of the men who get things done. That foe is what some erudite person has called "the perversity of inanimate objects." A line will part when it has no business to do so, a soft plug in the boiler will blow out when you are doing everything possible to keep her coming to avoid "hanging up", and to end Mr. Hudson's remarkable string of completed holes, the twistoffs that are a part of the bad dreams of every rotary driller came just below caves in the hole into which the pipe fell.

Had these twistoffs occurred 50 feet either way from where they did, the holes might have been saved, but this same perversity saw to it that they came when and where they did.

It might not be irrelevant to mention here that many of the lost holes are not so much the fault of the contractor or the driller as they are of the company for whom the well is being drilled. It is a common failing on their part to pound the contractor on the back for speed and more speed, forgetting for the moment that the contractor's profit lies in completing the hole as fast as is compatible with safety to the footage already made, and to the men and equipment.

"HUMP" HUDSON began his oil field experience back in 1903, in the old Sour Lake field of south Texas. He got his first drilling job a year later, in the same field. During the next 10 years he kept busy, either as a driller or producer, for in addition to working on more than 200 wells, he and his father organized two producing companies, and even went so far as to produce oil. The call of the wild

J. HUMPHREY HUDSON

goose neck was too strong, however, and in 1914 he organized the Hudson-White Drilling Co., which has since become the J. H. Hudson Drilling Co., with headquarters at Ardmore, Okla. "Hump" has drilled wells ranging in depth from 286 to 4,720 feet. Strangely enough, the shallowest well, drilled in about six hours, came in for 15 barrels, while the deepest was a dry hole.

NEXT to obtaining contracts, perhaps the most important feature of well contracting is the getting of good men on the floor. The men of Mr. Hudson's outfit are the best men that he can get. He has six men, some of whom he "made" himself, who have been with him from five to seven years. When a rush is on he pays wages above scale to get the best men that can be found. In common with all successful contractors, he backs his men up with the best of material, holding them responsible for its proper treatment and care. Inasmuch as he has one rotary table that has made over 60,000 feet of hole, it is plain that his men do take care of the equipment. His instructions to his crews are simple and to the point:

"Use your head and lots of grease, try to make hole all the time, but take care of the hole you have made. If you are going to show speed, show it going into and coming out of the hole, keep her on bottom and keep her rotatin'. Don't get hurt and if you want to get drunk, lay off to do it."

His regulars get 10 days vacation with full pay every year.

Mr. Hudson has his rigging up done in the most modern fashion. The fittings are standard, and are interchangeable from one rig to another. The steam lines from the boilers are manifolded, and all valves and stops are at least six feet from the "pot", enabling the fireman to do a maximum of work with a minimum of ground to cover. This placing of connections has another good feature, in that it assures the proper functioning of the injectors, preventing their "kicking off," which they will do when overheated by being too close to the boiler.

THE Hudson method of stacking a rig when it is not in use is worth the telling. The drill pipe in sections is racked on timbers in two piles about eight feet apart. All miscellaneous items, small pieces of equipment, tongs, elevators and the like are placed between the two rows of pipe. Two joints of pipe are in turn placed across the two piles of pipe, one at each end. On top of this, another layer of drill pipe is placed. On top of the platform thus formed (arranged to be at wagon or truck bed height), all heavy equipment is placed, excepting a few heavy pieces, which are placed at the ends, between the rows of pipe. This makes it practically impossible for the ordinary thief, or the borrower with a forgetful mind, to help himself to any part of the equipment without the use of teams. All very small fittings are boxed and locked, the boilers are left on blocks and their stacks laid across the barrels to keep them out of the mud.

Equipment is not the only thing in which Mr. Hudson is modern. He was one of the "flying contractors" who covered his operations in an airplane, until he was "grounded" by his insurance policy. Perhaps one of the secrets of his success is that "Hump" is not so much interested in the "good old days" as he is in what the present and future may have to teach him.

Leak-proof tanks and pressure vessels—by oxwelding

ALL riveted storage tanks and pressure vessels develop leaks ultimately. Every year thousands and thousands of dollars' worth of volatile liquids evaporate from storage vessels even though the riveted vessels may appear tight when tested. Oxwelded vessels on the other hand are actually and permanently leak-proof.

That is why oxwelded tanks and pressure vessels have become popular.

A test was made recently on a welded tank five feet in diameter and forty-three feet long, made of inch and one-eighth steel with double-vee oxwelded joints. The vessel was designed on the basis of a fibre stress of 8,000 lb. per sq. in., but when the test pressure was raised to 1,000 lb., the testers were applying a pressure equal to three times the working pressure (based on a design fibre stress of 9,000 lb. per sq. in.). Two tests at this pressure showed practically no distortion except around the manhole. It was then tested to destruction, and failed through the manhole. Examination proved that the welds were in no way affected.

It would be impossible to make such a high proof test on riveted pressure vessels because the riveted seams spring leaks long before the walls or the heads are severely stressed. But it is now possible to test even the head construction and design, since oxwelded joints and seams are as strong as the metal walls themselves.

Linde Procedure Controls explain in detail the construction of pressure vessels with Oxweld No. 1 High Test rod.

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An Everyday Occurence

The following bit of poetry was sent to NATIONAL PETROLEUM NEWS *by the divisional sales manager of a large oil company. The author writes that the poem is "more in the nature of a complaint than anything else, but upon reading it I find there is a certain amount of sensible philosophy in its lines."*

When the boys drop in my office,
To pass the time of day,
I wish they'd quit their squawkin',
Cause things don't go their way.

They cock their feet up on my desk,
And then begin to sob;
It seems to me they'd do more good,
If they "tended to their job".

They moan about West Texas Oil,
And rave at Seminole;
And tell me Venezuela Crude,
Has got us in a hole.

Fuel oil is all shot to H--l,
And gasoline looks weak;
The market's sunk on lube oils,
In fact the whole thing's up the Creek.

And then they light a cigarette,
And hint 'round for a drink;
And when it ain't forthcoming,
They ask me what I think.

Then I up and tell 'em plenty,
'Cause by then I'm hoppin' mad;
If I don't relieve my feelings some,
They'll have me feeling sad.

"West Texas won't amount to much,
And Seminole's declinin';
Venezuela's closely held;
Why don't you quit your whinin'?

"Sure, fuel oil ain't so awfully strong;
But I ask you why it ain't?
It's 'cause a lot of guys like you,
Got scared and liked to faint.

"Why shouldn't gasoline look weak?
You never seen it strong
When summer weather rolled away,
And winter came along.

"And if your lubes ain't moving,
You've got yourself to blame;
Go put 'em in a fancy can,
And pick out a flossy name.

"Your outfit's losin' money?
With no relief in sight?
Say, you ain't helpin' things a bit
By groanin' 'bout your plight.

"Quit glarin' at the balance sheet,
Get out and do your best;
When things get sort of crossways,
That's no time to take a rest."

C. M. L.

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As far in advance of ordinary elevators as present day flying achievements are ahead of the experimental efforts of a decade ago.
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Volume Controllers Aid in Giving Uniform "Push" in Repressuring Sands

By C. E. Mason*

Written Exclusively for National Petroleum News

THE use of volume controllers in repressuring oil sands is new, although well known in other phases of producing. The author here explains their use to prevent, or at least mitigate, the evils of by-passing air or gas through the more porous parts of the sand.

ALL LOGICAL theories of depleting oil sands tend to show that the migration of gas through the sand carries oil, or rather assists the movement of oil towards the shot hole. Wells that have had long periods of settled production have generally always had equally long periods of gas production while rapid exhaustion of gas production has usually meant very low oil production although indications are that a very small percentage of oil has actually been extracted from the oil sand.

By repressuring process, we mean any method employed to force air or gas from another source or the gas production back into the producing sand, at some desired location; permitting its recirculation to assist the movement of oil—thus being able not only to produce more oil, but to recover ultimately a greater percentage by maintaining a much longer period of profitable production as a result of partially replacing or of not materially depleting, the natural gas supply.

The well locations through which gas or air is forced back into the sand are called "key wells." These key wells are generally located by a study of the geological structure, the geographic location of wells, and well production records; but sometimes by mere geographic location alone.

After key wells are located by one of the above methods, gas or air under pressure is turned into the well.

Nature's method of producing the original gas was in all probability a very slow method; thus pressure was gradually increased and actual movement of gas was very slow, causing no disturbance of the porous sand structure.

This method of turning high pressures into a sand of comparative low pressure creates a high differential between this location and all other parts of the sand. This gas under pressure will tend to migrate in all directions with greater volumes going toward the least resistance. Thus, if sand is any more porous in one direction, larger volumes will move in this direction with correspondingly higher velocity.

These larger volumes and higher velocities may gradually create looser and looser openings, extensive farther and farther out from the key well always in the direction of least resistance. If strata contain fine sand this fine sand may be carried and eventually plug the passage. The latter is commonly called "jamming."

If this flow of gas becomes greater, the higher velocity may literally bore a passage through the sand and gas may eventually break out at some remote well location. This breaking out into some other well location or through a cap rock to some other sand, is known as "by-passing" and is the cause of a great many failures or serious hindrances of repressuring.

The writer has known of cases where gas seemed to wind its way around other locations and seriously break out at some distant location, half a mile away.

WHENEVER gas is permitted to seriously by-pass, either the by-passed well must be made a key well or it must be at least partially shut in, in hopes that gas will not by-pass further or key well must be discarded and relocated.

In order for repressuring to be beneficial, the gas should penetrate slowly and it would seem that the proper method would be very slowly to increase the pressure. But if gas were to start to by-pass at any certain pressure, the pressure should be immediately reduced to prevent resulting large flows from cutting passages or jamming.

Thus, if we were to deliver a certain definite volume to the key well and there was an increase of flow through the sand due to a tendency to by-pass, the pressure at the well would be reduced on account of this increased flow, and the tendency to by-pass retarded.

If, with each reduction in pressure, we would reduce the volume delivered to the well, the cause of by-passing would be still further retarded and eventually eliminated. As long as there were no increasing flows, the volume—and thus the pressure—could be steadily increased until there was a noticeable increase in flow through the sand. It is, of course, desirable to deliver as great a volume as possible. These larger volumes may be obtained by a higher pressure as long as volume is dispensed uniformly without by-passing or jamming.

The operating principles of volume controllers, which control differentials, are such as to be entirely automatic in giving exactly these desired controls of volumes at the proper time. If they are designed to maintain constant differential across an orifice plate, this constant differential gives volumes directly proportional to the square root of the absolute static pressure.

A DESIRABLE volume controller installed on the line going to a key well will thus deliver a desirable maximum volume (if sand is capable of receiving this volume at the given compressor discharge pressure) and until it is reset at some greater differential, will constantly reduce this volume directly in proportion to the increased tendency of the sand to receive gas. If there is no increased tendency for sand to receive gas, volume will remain constant. Thus, a volume controller is a positive "watch-dog" constantly guarding against serious by-passing, or its resulting jamming.

Pressures and volumes vary considerably with different localities, depending entirely on porosity, thickness of sand and natural rock pressures. The usual maximum pressure for settled fields is about 300 pounds.

When pressure is first turned into key wells, the volume is very small; sometimes there is practically no flow at all after pressure is built up in casing and shot hole. If volume controllers are used, the differential may be set at some safety low point and the well will require no attention until differential has increased to control point. If well has, in the meantime, started to receive larger volumes or by-pass, a properly designed controller will automatically and pro-

*Engineer, the Foxboro Co., Inc.

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portionately reduce the volume. An examination of the differential and static records of the chart will show if increase has been gradual or sudden.

SUDDEN increase of differential and sudden decrease of static would generally indicate a tendency to by-pass, or at least a condition worthy of being analyzed, and the advisability of increasing the volume and to what amount will be up to the judgment and experience of the operator.

When key wells are selected by mere geographic position, or without consideration of definite scientific reasoning, it becomes even more essential that wells be protected against possibilities of by-passing, by the use of volume controllers. The reasons for this are easily understood when it is realized that no consideration has been made as to distribution of repressured gas. If conditions are unfavorable, high pressures will result by the refusal of sand to take volume and the dangers of by-passing are thus enormously increased.

It is not uncommon for key wells to be located in discarded or very small producing wells, with the idea of saving good producers. Unless such wells are located high on the structure and were good flush producers, with high gas-oil ratios, indicating that their rapid decline or exhaustion was due to exhaustion of natural gas supply, usually the only conclusion would be that there is an unfavorable gas communciation between these small producers and the rest of the sand. This condition would, of course, require high pressures for the distribution of desirable volumes of repressured gas and thus increase the dangers of by-passing and make the use of volume controllers essential.

In the application of volume controllers to repressuring, it is very necessary that instrument be capable of controlling differential within very narrow limits, or in other words, it is positively essential that the operating principles of the controller be such that the control point does not change with increased pressure drop across the control valve.

The fact that differential remains the same under extremely different conditions of flow, is the principle causing volume delivered to decrease inversely proportional to the increased flow through the sand. If, under these new extreme conditions of flow, which might be caused by tendency to by-pass, the differential is permitted to increase, the volume delivered may not decrease sufficiently to prevent by-passing and in extreme cases, this type of controller may even deliver greater volumes.

A simple demonstration of control with hand valves will illustrate this point very clearly; suppose we have a discharge header pressure of 300 pounds and a hand valve is set so as to pass 2,500 cubic feet per day into a well whose pressure is 295 pounds. We will assume that a slightly less resistance of sand, which might be due to a tendency to by-pass, would reduce the well pressure to 280 pounds. The hand valve setting under this new condition of flow, would deliver twice as much gas—thus more than doubling the cause of by-passing. And if well pressure should drop to 115 pounds, valve would be passing four times as much gas and any tendency to by-pass would be most completely carried out.

This example was based on assumption that well, when first put on pressure, was receiving a comparatively high volume of gas. In most cases, these first volumes are very small and in the above example, if the volume was only 1,200 cubic feet per day and well pressure should drop 10 pounds, volume delivered by hand valve would be three times as much. If this same condition were handled by differential volume controllers, the actual input would have been reduced, until instrument was reset for a higher differential and an examination of the static and differential records would enable operator to completely analyze changes of conditions of key wells and thus effect more uniform and profitable distribution of repressured gas by enabling him to prevent losses due to by-passing or troubles due to resulting jamming.

Spain to Pay for Seized Oil Properties

WASHINGTON, Jan. 13.—American oil properties in Spain will not be confiscated, according to assurances given this government by the Spanish premier and minister of finance. On account of fears that the Spanish government, which last June decreed a monopoly in petroleum and its products, might not deal justly or expeditiously with American claimants the state department from time to time recently has instructed the American embassy in Madrid to make proper representations to the Spanish government.

Since Dec. 1 the Spanish government has been taking over the oil properties of private owners. The plants of the Standard Oil Co. of New Jersey at Alicante and Valencia have been taken over. Another plant at Malaga, largely owned by Americans, has also beeen expropriated.

Dec. 27 the American charge d'affaires at Madrid cabled the state department at Washington that the Spanish premier and minister of finance promised the monopoly would deal liberally with the owners of seized property and seized products, that interest would begin at the time of the seizure, and compensation would follow as rapidly as possible.

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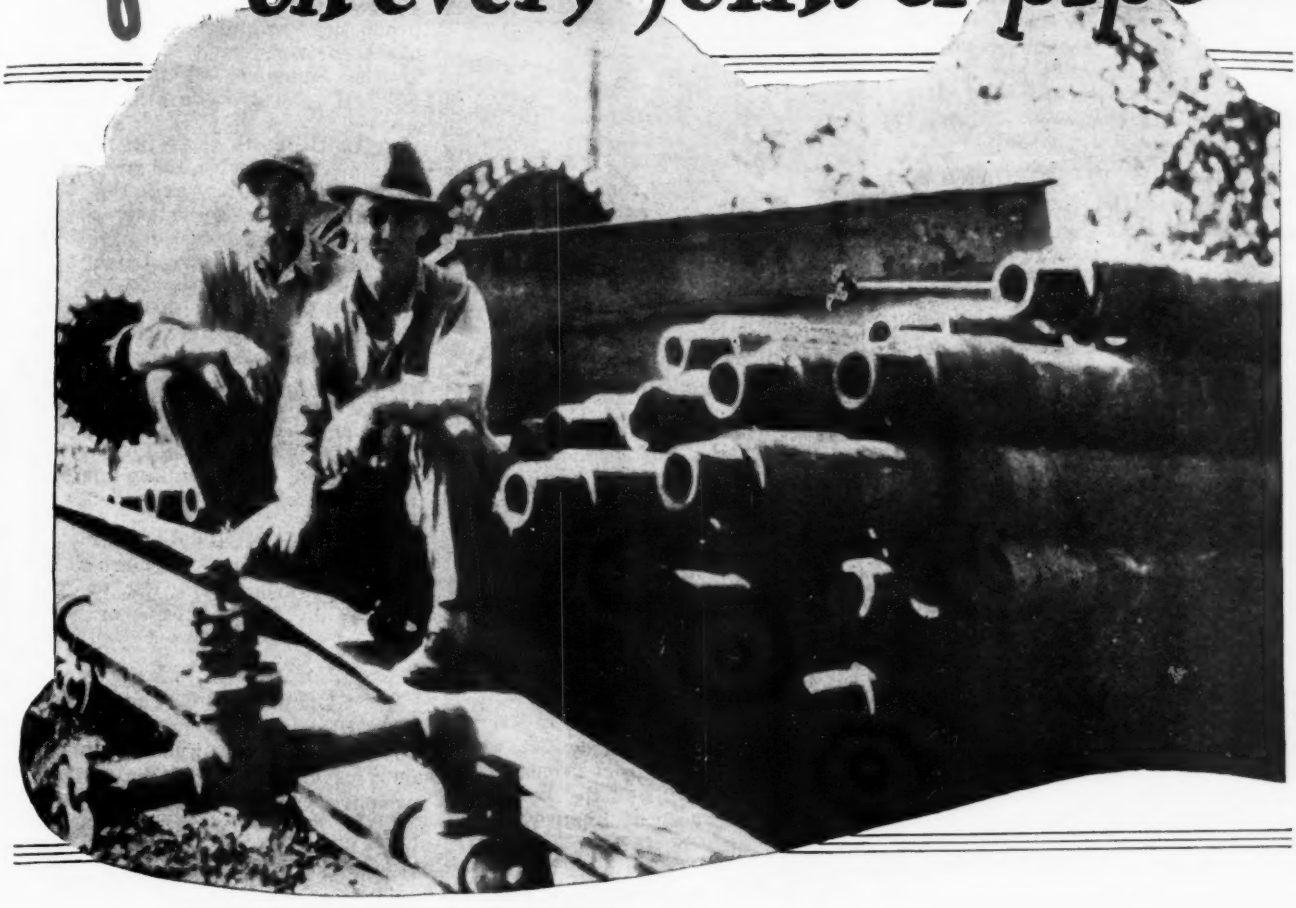

The above picture shows a string of 6"

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on the Cudjo lease—Searight field, Seminole, Oklahoma. The men are: Grover Simpson, Field Manager, and Virgil Wulz, Tool Pusher for Loffland Brothers, Contractors.

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Our Industry — A Page of Facts and Personalities

National Petroleum News

By Paul Wagner

H. S. JONES, formerly manager at Tampico of the Pantepec Petroleum Co., is associated with E. L. Buckley in the Midland Oil Co., with Fort Worth headquarters. W. A. Hudson, geologist, is also associated with Messrs. Buckley and Jones in the Midland company.

* * *

WILLIAM F. MORGAN, San Antonio, has become associated with the Houston Gulf Gas Co., since his recent sale to it of gas properties in the Refugio and Laredo districts for a consideration reported to be $934,000. The deal included sale of 16 gas wells and 60,000 acres in the Refugio district, and 20 wells and 35,000 acres in the Laredo district.

The Morgan properties had been built in their entirety within the last three or four years.

* * *

H. J. ADAIR of Wichita Falls, manager of the oil and gas bureau of the West Texas Chamber of Commerce, is opening an office at San Angelo.

* * *

IATAN district employes of Magnolia Petroleum Co. held a meeting and banquet at Big Spring, Texas, during the holidays. Producing department heads from Dallas were present, including Frank V. Faulkner, vice president and production manager; M. J. McLaughlin; J. L. Kilchenstein; F. S. Lane, drilling superintendent, and R. M. Johnson, land and leasing department. West Texas operating heads present included C. V. C. Bradley, Iatan district superintendent, and Frank H. Kelley of the land department at Colorado City.

* * *

CARROLL H. WEGEMANN, chief geologist of the Pan American foreign group companies, returned to New York late in December after a visit to Tampico. While in Mexico he went over properties of the subsidiary Huasteca Petroleum Co.

* * *

J. F. NELSON, formerly a pipe line station engineer for the Mexican Gulf Oil Co., in the Tampico district, is on his way to Maracaibo, where he will be identified with operations of the Venezuelan Gulf Oil Co., another subsidiary of the Gulf Oil Corp.

H. J. CORCORAN AND W. M. HARRISON

THE accompanying picture, recently taken at Fort Worth, shows H. J. Corcoran (left), president of the Reagan County Purchasing Co., Inc., Marland crude buying agency in the Big Lake field of Reagan county, Texas, and W. M. Harrison, head of the Star Refining & Producing Corp., which has a refinery in Fort Worth.

Marland owns 51 per cent of the Reagan County Purchasing Co., which gathers Big Lake oil from properties of the Texon-Group 1 and Big Lake companies for delivery at Kemper, Texas, under another contract to Humble Oil & Refining Co. Because of 49 per cent interest in the Reagan purchasing company, the Big Lake and Texon-Group 1 interests have representation on its board of directors. Levi Smith, president of the Big Lake, represents that company; Frank T. Pickrell, vice president, represents the Texon-Group 1 interests.

The Star company which also operates service stations in Fort Worth, was founded by Mr. Harrison and his associates about the time Ranger and Burkburnett field developments were at their height.

* * *

H. H. HOLLOWELL, formerly of California, and W. T. Jones, recently of the Texas Pipe Line Co. organization, are in charge of a Houston factory branch of the Atlas-Imperial Diesel Engine Co., of Oakland. Mr. Hollowell is district manager for Texas and the southwest.

A. M. SUTTON, Corinth wildcatter, is the president of the new Mississippi Oil & Gas Association formed at Amory for consideration of questions concerning exploratory work and possible production. Hayes Brummett and Charles L. Tubbs are, respectively, first and second vice presidents. Jerry Whalen, Ohio Oil Co., and Harry Hodges, Fayette, Ala., are also vice presidents. F. N. Henderson is secretary-treasurer.

* * *

HICKS H. ALLEN of the Texas division of the Pure Oil Co.'s production engineering organization has been transferred to gas lift work in the Seminole, Okla., district.

* * *

CHARLES H. LANE, who occupies the double roll of an equipment manufacturer and the blocker of acreage for operating purposes, has resigned as general superintendent of the Louisiana Land & Exploration Co., Houston. Mr. Lane had been identified with the Louisiana company since its inception and previous to that was in charge of land operations of the Border Research Corp., which it absorbed. The manufacturing organization headed by Mr. Lane is the Thrift Corp., makers of hydraulic casing pulling equipment.

* * *

W. N. FIGHTMASTER, at one time chief engineer at Houston for Marland Oil Co. of Texas, now is in the right-of-way department of the Dixie Gas & Utilities Co.

* * *

A SUMMARY of Texas Panhandle development at the end of 1927 shows 1,399 wells producing a daily average of 81,433 barrels as compared with 813 wells yielding 145,199 barrels, twelve months previously.

Hutchinson county, which has always led in Panhandle development, had 1,019 wells to its credit, making 53,636 barrels daily. This total compared with 647 wells which averaged 131,251 barrels at the end of 1926.

Carson county in 1927 increased its number of wells from 68 to 159 and brought up its daily average production from 3,116 barrels to 7,679 barrels.

Gray county had 181 wells making 18,785 barrels as compared with 85 wells yielding 9,770 barrels daily.

Wheeler county was producing 1301 barrels from 36 wells as compared with 1027 barrels from 12 wells.

The three small oil wells completed in Moore county in 1927 remained shut in.

* * *

GEOLOGICAL work of the National Refining Co. in Texas is being carried on by Howard Clark, who makes his headquarters at Abilene.

New Equipment

Wilson Welder & Metals Co., Inc., Hoboken, N. J., has appointed these representatives for its welding machines: Joseph T. Ryerson & Son, Inc., Chicago, Ill.; Jersey City, N. J.; Buffalo, N. Y.; Pittsburgh, Pa.; Cleveland, O.; Detroit, Mich.; Cincinnati, O.; St. Louis, Mo.; Houston, Tex.; Boston, Mass.

Oliver H. Van Horn Co., Inc., New Orleans, La.; and

Smith-Booth-Usher Co., Los Angeles and San Francisco, Calif.

For welding wire: Austin-Hastings Co., Inc., Boston, Mass.

Oliver H. Van Horn Co., Inc., New Orleans, La.

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J. G. Cristopher, Jacksonville, Fla.

Peter A. Frasse & Co., Inc., New York, N. Y.; Hartford, Conn.; Buffalo, N. Y.; Philadelphia, Pa.

General Engineering Co., Casper, Wyo.

North Coast Electric Co., Seattle, Wash.; Tacoma, Wash.; Portland, Ore.

Geo. A. Post Co., Inc., New York.

Steel Sales Corp., Chicago.

Sligo Iron Store Co., St. Louis, Mo.

Chas. A. Strelinger Co., Detroit, Mich.

Welding Engineering Co., Bartlesville, Okla.

Williams & Co., Inc., Pittsburgh, Pa., and

Welding Products Co., Birmingham, Ala.

These foreign distributors for welding machines and wires:

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Amsterdamsch Kantoor Voor Indische Zaken (Dutch East Indies), Brooklyn, N. Y.;

Baldwin Locomotive Works (South America, West Indies, Continental Europe, Northern Manchuria), Philadelphia, Pa.;

International Railway Supply Co. (South America, Central America, Cuba, Mexico, China, Philippine Islands), New York, N. Y.;

G. D. Peters & Co. Ltd., (Canada, Great Britain, Ireland, South Africa, India, Australia, New Zealand, Denmark, Spain, Portugal), Montreal, Canada, and London, England.

* * *

Air Reduction Sales Co., 342 Madison Ave., New York City, has off the press a reprint of the paper of H. J. Grow, of its engineering research department, entitled "A Study of Oxy-acetylene Welding as Applied to Light Gauge Pressure Containers," in which a study of the forces set up by expansion and contraction of thin gauge metals when welded, and the simple provisions that have been found to counteract welding difficulties, is presented.

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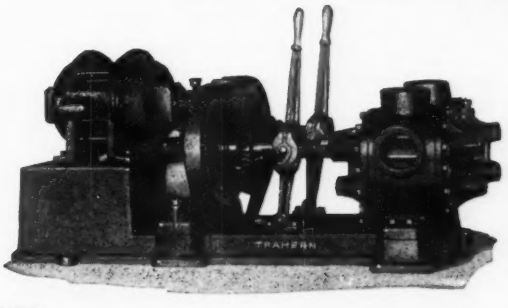

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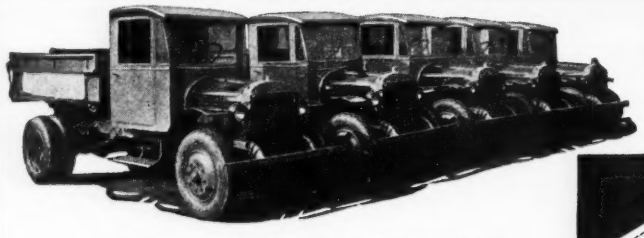

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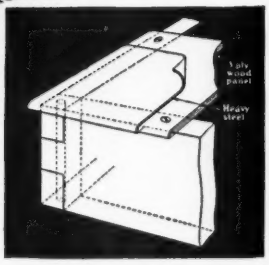

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28496—**Lubricating oils,** Baghdad, Iraq, agency or purchase.

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28589—**Lubricating oils,** Lisbon, Portugal, agency.

28672—**Heavy oils and greases,** Havre, France, agency.

28673—**Lubricating oils, white oil and petrolatum,** Antwerp, Belgium, agency.

28674—**Gasoline,** Tallinn, Estonia, agency.

28720—**Dark green paraffin,** Vienna, Austria, purchase.

28721—**Paraffin in blocks,** Erfurt, Germany, purchase.

28722—**15,000 kilos paraffin,** Sayula, Mexico, purchase.

28732—**Lubricating oils, automobile,** Durango, Mexico, agency and purchase.

28733—**Lubricating grease, automobile,** Durango, Mexico, purchase.

How Business Men Can Find Time To Read

By John Allen Murphy

National Petroleum News

NO ONE ever heard President Roosevelt say that he didn't have time to read. On one occasion, the author of a book on bird lore presented the president with an autographed copy. It was during a period of unwonted activity at Washington. A cantankerous congress was in session. Ticklish negotiations with foreign powers were under way. The capital was filled with delegations. Every moment of the President's time was strenuously occupied.

And yet, two days later, when the author of the bird book accidentally encountered the nation's chief at a reception, the President hailed him with delight. *He had read the book,* and voiced his enthusiasm in no uncertain terms.

The beloved Colonel was one of the best informed men of his time, because he never allowed himself to be idle. If he were not otherwise engaged, he picked up a book or an article that had been clipped for him from a trade paper, newspaper or magazine by one of his secretaries. By thus taking advantage of his leisure, he read more in one single year than an ordinary person reads in an entire life time.

Benjamin Franklin was able to live a dozen careers and to attain undying fame in each, because of the zeal with which he guarded his time. Once a man went into his shop to buy a book. Franklin quoted the price. The customer protested. Franklin immediately raised the price. The buyer protested more violently than before. Franklin again added a few more pennies to the price. When the man asked for an explanation of the unstability of the shop's prices, Franklin told him that he was being charged for the time he was losing in dickering.

And yet, great accomplishments do not necessitate long hours. Sir Walter Scott, Carlyle, Coleridge, Victor Hugo, Zola, Emerson, Jules Verne, and countless others, who are credited with prodigious achievements, worked only two or three hours a day.

Francis Parkman, the eminent historian, was so nearly blind that he could use his eyes only a few minutes a day. Yet he employed those minutes so well that he became America's greatest historian.

Herbert Spencer, the English philosopher, had wretched health. He could only work an hour at a time, but that hour, when applied day after day and year after year, made him one of the most learned men of the ages.

These men accomplished what they did because they concentrated intensely during their limited working period, and because they let no day go by without some accomplishment.

That is all there is to being able to find time to read. If he will devote a few of his otherwise wasted moments to reading, the business man will find ample time at least to read the trade papers of his industry, a couple of good newspapers and all of the worth-while books pertaining to his line of work that may be published.

An hour a day, systematically devoted to reading, will not only keep a business man well informed, but it will give him a breadth of view that will prove itself of cash value in his work.

The Service Station Man

The following poem was written by Art C. Withrow, representative of the Fred G. Clark Co. in Iowa. It was sent out as a Christmas greeting card from Hyvis oil, manufactured by the Fred G. Clark Co.

Let's give a toast to old Danny Boy,
The Service Station man;
He's always a fillin' our hearts with joy,
And cheerin' us up all he can.
Sometimes he is blue and sad, it is true,
But he's always out there with a smile,
A whistlin' or singin' his little old song,
And giving a service worth while.
He knows all the kids 'round the old neighborhood,
The old folks all call him their pal;
Of the favors he's done for most everyone,
You never will hear of him tell,
Tho its rainin', or snowin', or sleetin' outside,
He's always out there with a smile,
A whistlin' or singin' his little old song,
And giving a service worth while.
It's fill 'er up, Sir? May I look at your oil?
Or check up your tires today?
Or water the Bus, the thirsty old cuss?
Or give you a lift on your way?
Wherever you find him, with me you'll agree,
He's always out there with a smile,
A whistlin' or singin' his little old song,
And giving a service worth while.

Oil leaks licked

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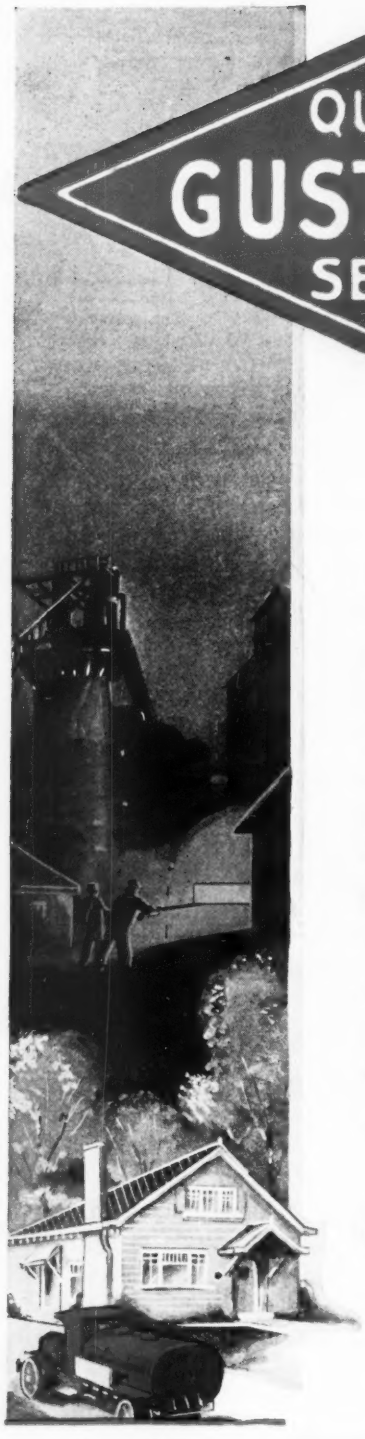


QUALITY
GUSTAFSON
SERVICE

Confidence and Sincerity

Jobbers continue with us from year to year because they get the quality petroleum products they want—when they want them and at a fair price.

These are the business fundamentals upon which we have built our service organization to handle your requirements for

FUEL OIL—GAS OIL—DISTILLATE and PENNSYLVANIA LUBRICATING OILS

Our lubricating oils are shipped direct from the refinery in carloads and drum lots.

An inquiry will bring you full information and quotations.

Gustafson Bros. Oil Company
624 South Michigan Avenue, Chicago, Ill.
Cleveland Office: 1746 E. 12th St.

C. A. Gustafson, President — C. W. Johnson, Secretary
Fred A. Gustafson, V.-P. & Treas.

Sales Department:
R. D. Haynes—Geo. N. Olson, Chicago
J. E. Hansen, Cleveland Office

Allison Coupon Books

Accurate—Compact—Convenient

The experience of 39 years has made the form of the Allison Coupon Book simple, practical and dependable. Progressive, wide-awake filling stations are exclusive users. Every book guaranteed to be absolutely accurate. Furnished in stock or special designs. *Send for samples and prices.*

Allison Coupon Company
Indianapolis, Indiana
Coupon Book Specialists Since 1888

New Stations Building

Maywood, Ill.—Roxana Petroleum Corp. is completing filling station.

Dunkirk, Ind.—W. C. West will build filling station.

Washington C. H., O.—J. E. Smith Oil Co. will erect filling station.

Columbus, O.—Gaty Oil Co. will build filling station.

London, O.—Roxana Petroleum Corp. is completing filling station.

Springfield, O.—Roxana Petroleum Corp. will build filling station.

Charlotte, N. C.—W. C. McManus will build filling station.

Bath, N. Y.—O. A. Swain, whose filling station at Kanona burned recently, will erect another one immediately.

Grand Saline, Tex.—S. O. Lindsey is completing filling station.

Boone, Ia.—Standard Oil Co. of Indiana will erect filling station.

Jefferson City, Mo.—Roxana Petroleum Corp. will erect filling station.

St. Louis, Mo.—Thomas M. Kerins and Tracy Sullivan both seek permits for filling station.

Sparkman, Ark.—Allen Rucker is building garage which will include filling station.

Atchison, Kan.—Skelly Oil Co. will build filling station.

Covington, Tenn.—Robert Williams is building filling station.

Ashtabula, O.—The Aero Gasoline, Inc., Erie, Pa., is building filling station.

Salem, O.—Mrs. Catherine Kaminsky, Youngstown, O., has purchased site here for filling station.

Convoy, O.—Convoy Equity Exchange Co. will build bulk station.

Tiffin, O.—Roxana Petroleum Corp. will erect filling station.

Springfield, O.—Matt L. Brown seeks permit for filling station.

Columbus, O.—Roxana Petroleum Corp. has acquired site for filling station.

New Brighton, Pa.—Sterling Oil Co. is completing filling station.

Grand Rapids, Mich.—Mrs. Mary Savage will build filling station.

Marion, N. Y.—Marion Oil & Gas Co. is building filling station.

Wapakoneta, O.—Landes Motor Inn, Inc., will build super-service station.

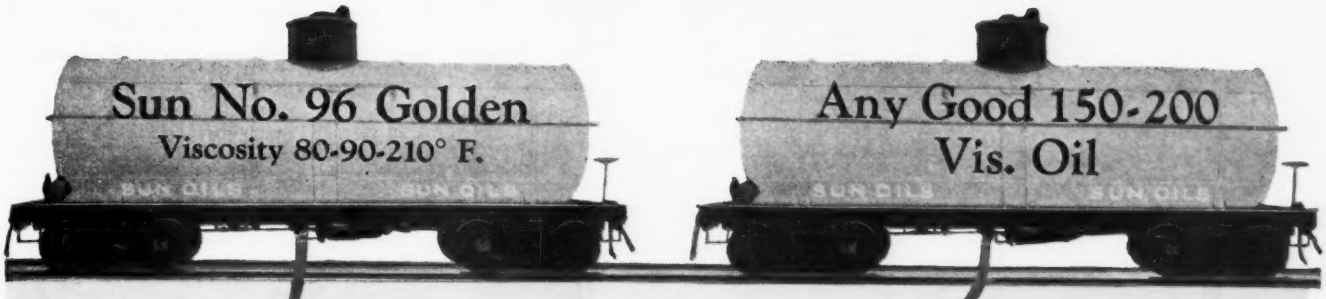
Salem, O.—E. H. Althouse will erect filling station.

Sebring, O.—E. W. Hoffman is completing filling station.

Marcellus, Mo.—Mid-Continent Petroleum Corp., Tulsa, is building filling station.

League City, Tex.—D. Frank Ervin is completing building which will include filling station.

WASHINGTON, Jan. 12.—Panama advanced the duty on gasoline 100 per cent effective Jan. 1. The new duty will be 10 per cent ad valorem as against the old duty of 5 per cent. A gasoline and alcohol dehydration plant is to be bought and operated under government supervision and the mixture will be tested in government cars, the commercial attache at Panama City informed the Department of Commerce here.



Compound *all* your Requirements with *only* 2 basic oils

Write for Booklet, Mixing Charts and Full Particulars

WITH this remarkable new product and Sun No. 92 Golden or any 150 or 200 Vis. Neutral Oil you can *blend your own oils* of *high quality* and *any viscosity* EASILY, AT A REAL SAVING and WITH GREATER PROFIT

. . . *because* you only need two large storage tanks; you buy in tank car lots at tank car prices; you save tankage and storage space; your capital investment is smaller and your turnover is quicker.

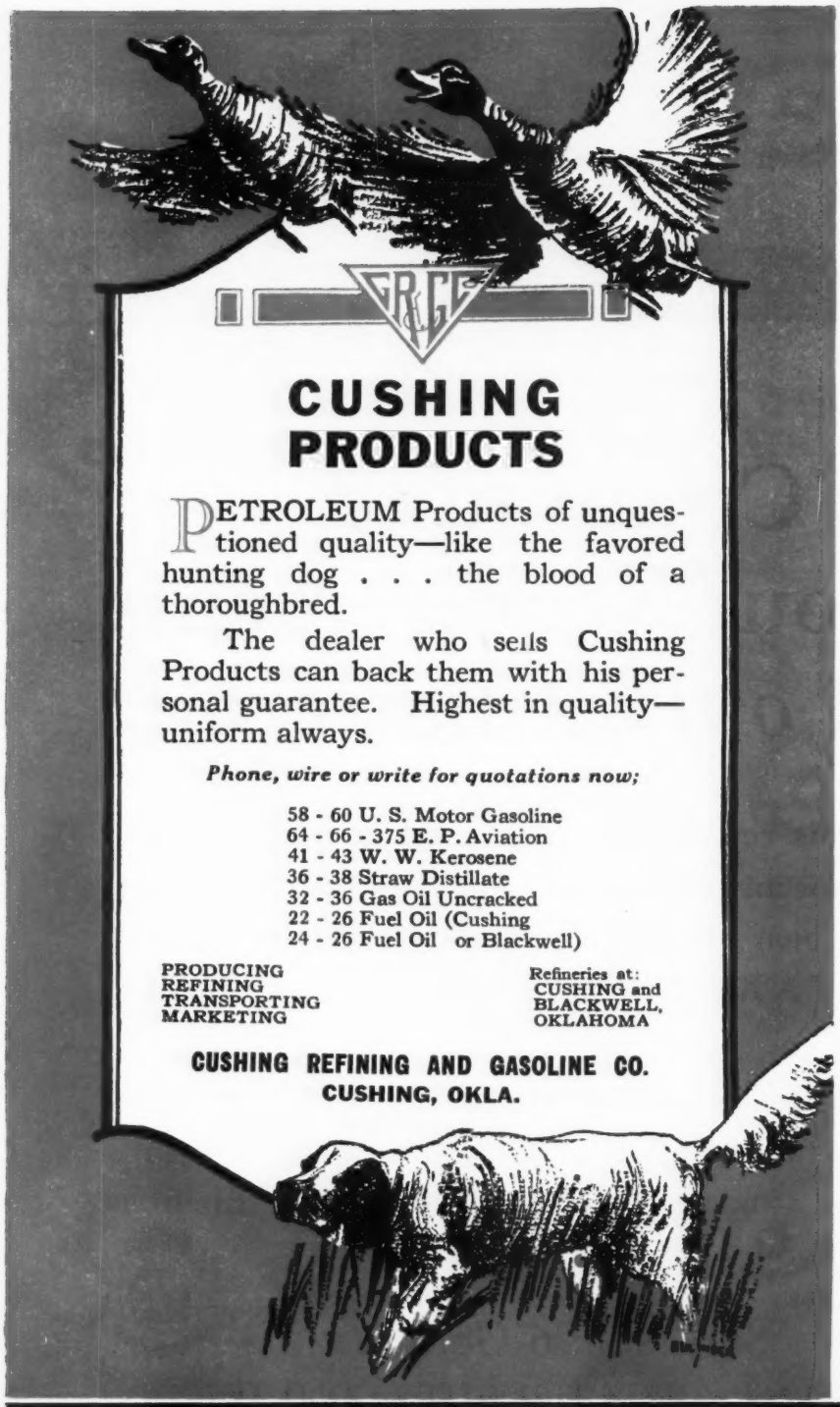
Sun No. 96 Golden

HIGH FLASH—HIGH FIRE—LOW COLD TEST
LOWEST CARBON CONTENT—PERFECT DEMULSIBILITY
PALE COLOR—PRICED RIGHT

SUN OIL COMPANY, *Philadelphia*

No. 96 GOLDEN

VISCOSITY 80-90 AT 210° F.


CUSHING
PRODUCTS
PETROLEUM Products of unquestioned quality—like the favored hunting dog . . . the blood of a thoroughbred.
The dealer who sells Cushing Products can back them with his personal guarantee. Highest in quality—uniform always.
Phone, wire or write for quotations now;
58 - 60 U. S. Motor Gasoline
64 - 66 - 375 E. P. Aviation
41 - 43 W. W. Kerosene
36 - 38 Straw Distillate
32 - 36 Gas Oil Uncracked
22 - 26 Fuel Oil (Cushing
24 - 26 Fuel Oil or Blackwell)
PRODUCING
REFINING
TRANSPORTING
MARKETING
Refineries at:
CUSHING and
BLACKWELL,
OKLAHOMA
CUSHING REFINING AND GASOLINE CO.
CUSHING, OKLA.

BETHLEHEM
WAX PLANT EQUIPMENT

Filter Presses — *Wax Moulding Presses*
Wax Distillate Chilling Machines — *Scale Wax Cooling Drums*
Wax Testing Presses — *Paraffine Wax Sweater Plants*
Complete Wax Plants designed and built
Pumps, Stills, Towers, Condensers and other Oil Refinery Equipment
Oil Burning Systems — *Complete Power Plant Equipment*

BETHLEHEM STEEL COMPANY, *General Offices, Bethlehem, Pa.*
District Offices
New York Boston Philadelphia Baltimore Washington Atlanta Pittsburgh Buffalo
Cleveland Detroit Cincinnati Chicago St. Louis San Francisco
Los Angeles Seattle Portland

New Patents

Jan. 3

REFINING

Conversion Apparatus for Refining Hydrocarbon Materials—Russell K. Collins, Fort Worth, Tex., assignor to Collins Process, Inc., Wilmington, Del. Filed May 18, 1922. No. 1,654,577.

Expansion Process and Apparatus for Refining Hydrocarbon Materials—Russell K. Collins, Fort Worth, Tex., assignor to Collins Process, Inc., Wilmington, Del. Filed May 23, 1922. No. 1,654,578.

Heat Protecting Means for Expansion Tanks of Hydrocarbon-Refining Apparatus—Russell K. Collins, Fort Worth, Tex., assignor to Collins Process, Inc., Wilmington, Del. Filed March 24, 1926. No. 1,654,579.

Expansion Process and Apparatus for Refining of Hydrocarbons—Russell K. Collins, Fort Worth, Tex. Filed July 28, 1926. No. 1,654,580.

Process of Desulfurizing and Purifying Petroleum Oil—Roy Cross, Kansas City, Mo. Filed Nov. 21, 1923. No. 1,654,581.

Apparatus for Treating Hydrocarbon Liquids—Roscoe C. Kirwin, Coraopolis, Pa. Filed Oct. 9, 1925. No. 1,654,654.

Treating Hydrocarbon Oils—Edson R. Wolcott, Los Angeles, assignor to The Texas Co., New York, N. Y. Filed Oct. 1, 1924. No. 1,654,771.

Method of Distilling Hydrocarbons—William M. Duncan, Alton, Ill. Filed July 14, 1924. No. 1,654,797.

Oil Cracking Apparatus—Frank C. Van de Water and Frederick B. Sunderman, Newburgh, N. Y., assignors to Petroleum Laboratories Inc., Newburgh, N. Y. Filed Aug. 29, 1922. No. 1,655,030.

Method and Apparatus for Continuously Condensing Oil Cracking Still Vapors—Richard Fleming, Westfield, N. J. Filed Nov. 19, 1920. No. 1,655,053.

PRODUCTION

Well Reamer—Floyd L. Scott and Ralph Neuhaus, Houston, Tex., assignors to Hughes Tool Co., Houston, Tex. Filed June 11, 1925. No. 1,654,609.

Oil-Well Swab-Tripping Device—Wilbert H. Hardman, Morrison, Okla. Filed Jan. 7, 1927. No. 1,654,686.

Method of and Apparatus for Detecting Binding Points in Well Casings—Myron M. Kinley, Tulsa, Okla. Filed March 26, 1926. No. 1,654,819.

Pipe Clamp—Marvin B. Davis, Kansas City, Mo., assignor to George Krell, Sapulpa, Okla. Filed Aug. 10, 1925. No. 1,654,866.

Oil Saver—Benjamin Eugene Parrish, Honey Grove, Tex., assignor of one-third to Darwin W. Maurer, Dallas, Tex., and one-third to Nolan S. Von Phul, Tampico, Mexico. Filed April 13, 1926. No. 1,654,994.

Long-Stroke Pumping Apparatus—George Kammerer, Whittier, and Frank Hill, Los Angeles, Calif. Filed Dec. 7, 1925. No. 1,655,062.

Oil-Saving and Line-Clamping Device—Benjamin E. Parrish, Honey Grove, Tex., assignor of one-half to D. W. Maurer, Dallas, Tex. Filed July 18, 1924. No. 1,655,159.

NATURAL GASOLINE

Treatment of Fuel Gas—Eugene H. Bird, Pittsburgh, Pa., assignor to The Koppers Company, Pittsburgh, Pa. Filed Jan. 2, 1923. No. 1,654,782.

Absorber—Julian A. Campbell, Long Beach, Calif. Filed July 30, 1925. No. 1,654,785.

MISCELLANEOUS

Process of Reactivation of Adsorptive Material—Walter S. Baylis, Los Angeles, Calif., assignor to Filtrol Company, Los Angeles, Calif. Filed April 5, 1926. No. 1,654,629.

Process for the Chlorination of Saturated Hydrocarbons—Erich Krause and Kiloman Roka, Konstanz, Germany, assignors to Holzverkohlungs-Industrie, Aktien-Gesellschaft, Konstanz, Badenia, Germany. Filed June 4, 1924. No. 1,654,821.

ON THE LAZY BENCH

National Petroleum News

Natural History Lesson No. 24

Q.—What is the difference between learning golf and motoring?

A.—In golf you hit nothing and in motoring you hit everything.

Q.—What was the speed crank's last truthful statement?

A.—"Now watch the speedometer hit sixty."

Q.—What is the one thing in the world you can't buy when you need it most?

A.—Accident insurance. You have to buy it when you don't need it, or not at all.

Q.—What is the best way to prevent diseases caused by biting insects?

A.—Don't bite the insects.

Q.—How long should you cook spaghetti?

A.—About ten inches.

Q.—How can I tell the horse power of a car?

A.—Lift the hood and count the "plugs."

Q.—Where is the best place to get auto parts?

A.—At the railroad crossing.

Q.—What is the hardest job you know of?

A.—Trying to sell buggy whips to Ford.

—The Loreco Diamond

Had Been the Rounds

He took her hand in his and gazed proudly at the engagement ring he had placed on her fair finger only three days before.

"Did your friends admire it?" he inquired tenderly.

"They did more than that," she replied coldly. "Two of them recognized it."

—The Loreco Diamond

* * *

Wife (looking up from her newspaper)—"It tells here about a man giving his wife a $500 necklace. Nothing like that ever happens to me."

Husband (looking up from his)—"I was just reading about a man giving his wife a pair of black eyes. Nothing like that ever happens to you, either."—*Barnsdall.*

* * *

So It Does

She—Time separates the best of friends.

He—Quite true. Fourteen years ago we were both eighteen. Now you are twenty-three and I'm thirty-two.

—The Loreco Diamond

* * *

"The next person who interrupts the proceedings will be sent home," declared the judge.

"Hurray!" yelled the prisoner.

—Barnsdall.

There's at Least One in Every Office : : : : By BRIGGS

READS PARTLY FINISHED LETTER ON TYPEWRITER WHILE STENOG IS OUT TO LUNCH
GLANCES OVER MAIL ON CHIEF CLERK'S DESK
READS INTERESTING PRIVATE LETTER ON MANAGER'S DESK
IS CAUGHT GLANCING OVER SHOULDER OF SALES MANAGER
CAN'T RESIST GOING THROUGH A FEW IMPORTANT TELEGRAMS ON DESK OF THE CHIEF
HERE'S A FEW IN THE WASTE BASKET YOU CAN READ AT YOUR LEISURE
BRIGGS

© New York Tribune, Inc.

New Box Type Case

Completely equipped with bottles and jars . . . $15.75

269—A real oil sales case, covered with smooth black cowhide. Lined with red velvet. Case contains fourteen 4-ounce bottles and ten ½-ounce squat grease jars held in position by adjustable bars. Bottles are partitioned separately.

Less 10% for Cash
Other styles in our FREE Catalog

L-U-C-E

Builders of Sales Luggage
614 Delaware Kansas City, Mo.

Neutrals for AUTO OILS!

Refined from genuine Kentucky crude.

PARAFFINE BASE.

Filtered through Fuller's Earth.

Wax pressed out.

Excellent for turbine and motor oil compounding.

Our fleet of 75 tank cars assures prompt service.

Assorted cars our specialty.

Whatever you want—a can or a carload—*be sure to get our prices!*

STOLL OIL
REFINING COMPANY

Incorporated *Main Office and Refinery:* *Est. 1896*
LOUISVILLE, KY.
Cable Address: STOLOIL, LOUISVILLE

This SIGN invites the careful motorist into your station!

THE meaning of this sign is becoming more and more widely known to alert and careful motorists. When they see it on your station they *know* that you are a Dealer who not merely sells oil, but *gives correct lubrication.*

The Dealer who shows this Sign asks the man who drives in for oil—*"What is the mileage on your speedometer?"* Then he consults the Sinclair Recommendation Index and gives the motorist exactly the right grade of Opaline to fit the degree of wear in the car's engine and *seal* its power!

May we tell you about this successful method of selling *correct lubrication* with the full line of Opaline Motor Oils?

SINCLAIR REFINING COMPANY, INC.

Also Makers of Sinclair Gasoline and H-C Gasoline

45 NASSAU STREET, NEW YORK

Atlanta Boston Chicago Houston Kansas City

Authorized Dealer

SINCLAIR OPALINE MOTOR OIL

REG. U.S. PAT. OFF.

Seals Power at every Degree of Wear

Mild Weather and Exporters Increase Mid-Continent Gasoline Sales

Staff Special
TULSA, Jan. 14

EXCEPTIONALLY mild weather for this season of the year and continued interest on the part of exporters created a good demand for gasolines in the Mid-Continent refinery district this week. Prices on all the principal grades, however, were unchanged from a week ago.

Demand for furnace oils, especially the low cold test grades, kept pace with gasolines, while natural gasolines experienced fractional advances in prices under the stimulus of considerable buying power exercised by at least three large manufacturers who were covering some of their orders by taking open market goods.

One export company this week bought 500,000 gallons of 61-63, 390 e.p. gasoline in north Texas. The price was not revealed. The same company was reported to be inquiring for more goods of the same grade, as well as for a quantity of 64-66, 375 e.p. gasoline. The inquiries late in the week were extended to Oklahoma. Other export companies also were reported making inquiries in the field, with occasional small lot sales. Indications were that the north Texas refiners, being comparatively well booked on export orders for the remainder of this month, are showing some reluctance to offer any more goods at the present time.

An Arkansas refiner late last Saturday afternoon closed a deal for approximately 250,000 gallons of 64-66, 375 e.p. gasoline for export shipment, the price net back at his refinery being 7.05 cents a gallon, as compared with the prevailing offers of 6.50 and 6.625 cents, f.o.b. north Texas refineries. It must be borne in mind, however, that the Arkansas-Louisiana refiners have a more advantageous export freight rate than Oklahoma and north Texas refiners.

Export interest apparently was not confined to gasolines in north Texas. One company late in the week bought 200,000 gallons of 41-43 gravity kerosene at a price of 4.125 cents a gallon, and was reported to have made a few inquiries for the same grade of goods in Oklahoma. No sales were reported in Group 3, however, prior to the close of business today.

BULLETIN

By Telegraph

WICHITA FALLS, Jan. 16.—Approximately 500,000 gallons of 64-66, 375 e. p. gasoline were reported bought here late Saturday at 6.50 cents for export.

Domestic gasoline sales have been coming in well throughout the entire week, a majority of refiners reported. Several said their shipments this week would more than take care of their current production. With prices at their present levels it would not be surprising, several refiners said, if a few of the larger jobbers in the consuming territory were putting at least a part of their purchases in storage.

ONE large company which is a big factor in the spot market in the middle western states, closed one of its Oklahoma refineries this week, the shutdown to be of an indefinite duration. This company in past years has been forced to buy some of its gasolines from other refiners during the season of peak demand, and while it is generally understood the plant which is still operating will take care of the company's business to a large extent at the present time, it is freely predicted that the company will be forced to begin buying large quantities of gasoline on the open market within the next two or three months. Another refining company virtually closed one of its Oklahoma plants for several days and is reported to be preparing to close its plant located in Kansas.

The Arkansas-Louisiana refiners, be keeping down their crude runs somewhat, have been holding their shipments in step with production. One Louisiana refiner said today that while domestic demand for gasolines was fair, he had several inquiries from large companies operating in the south, which indicates they are seeking to buy some of their gasolines for their stations in the open market or are buying for storage. The Pan-American company since closing its plant at Destrehan some weeks ago, has been buying some gasolines from other refiners in the district in which it operates service stations, and it is thought this buying will continue at least until the Dixie Oil Co. reopens its plant at Superior, La.

The Phillips Petroleum Co. for the past few weeks has been a major factor in the natural gasoline market. The company this week combed the field for doctor and corrosion test Grade AA, buying also a small quantity of non-doctor goods. The company is known to have bought in excess of 175 cars of Grade AA during the week. Two other large companies also have been in the market, one of them seeking quantities of Grade C.

Shipping instructions furnished sellers indicate that the bulk of the spot purchases of Grade AA have been moving to three large refineries on the Gulf coast, as well as on contracts to a fourth large company which has been exporting a considerable quantity of naturals.

Prices on Grade AA moved up .125 to .25 cents a gallon during the week, while price of Grade C moved up .125 cents.

Domestic demand for kerosenes was somewhat lighter this week, a majority of refiners reported. Marketers also reported they had been offered some goods at prices fractionally lower than they were quoted last week. The prevailing price on 41-43 w.w. grade today was 4.25 to 4.375 cents a gallon, with odd cars for resale at 4 to 4.125 cents a gallon. Several refiners on the other hand who have ample storage facilities are quoting 4.50 cents a gallon. The spring demand usually reaches its peak in February.

CONSIDERABLE buying of low cold test fuel oils developed this week in the Oklahoma market. Refiners for the most part indicated today that they were well sold up on their low cold test goods for the

(*Continued on Page* 109)

Speeds of more than 80 miles an hour with the wind on straightaways are attained by ice-boats. The record over a 20-mile triangular course is 49 minutes, 30 seconds.

SKELLY

QUALITY HAS NO SUBSTITUTE

Winter's Fastest Speeder

A wintry gale . . . glass-like surface . . . and an ice boat beats them all. And winter is when Skelly *Refractionated* Gasoline wins out. Its low initial boiling point gives quick start. Immediately you accelerate, without spits and puffs, and away you speed. Complete gasification, made possible by the Skelly *Refractionating* System of refining, gives you these advantages. You can sell Skelly *Refractionated* Gasoline to your trade and feel confident the product will more than satisfy. Write, wire or phone Skelly Oil Company, Eldorado, Kans., Tulsa, Omaha, Minneapolis.

SKELLY *Refractionated* GASOLINE

REFINED BY THE MAKERS OF TAGOLENE MOTOR OIL

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

	Prices Jan. 16	Prices Jan. 9	Prices Jan. 3
PENNSYLVANIA			
52-54 Naphtha	8.00 – 8.25	8.00 – 8.25	8.00 – 8.25
54-56 Naphtha	8.25	8.25	8.25
58-60 Gasoline	7.875–8.25	8.00 – 8.25	8.00 – 8.25
60-62 Str.-run gasoline	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
64-66 Str.-run gasoline	9.00 – 9.50	9.25 – 9.75	9.25 – 9.75
68-70 Str.-run gas. 350-360 e.p.	10.00 –10.50	10.25 –10.50	10.25 –10.50
OKLAHOMA			
48-50 450 e.p. naphtha	†5.625– 5.75	†5.625– 5.75	†5.75
50-52 450 e.p. naphtha	†5.625– 5.75	†5.625– 5.75	†5.875
56-58 450 e.p. gasoline	**5.50 – 5.75	**5.75 – 5.875	**5.75 – 5.875
58-60 450 e.p. gasoline	**5.50 – 5.875	**5.75 – 5.875	**5.75 – 6.00
56-58 U. S. Motor, 437 e.p.	††5.75	††5.75	††5.75
58-60 U. S. Motor, 437 e.p.	5.625– 6.00	5.625– 6.00	5.75 – 6.00
60-62 437 e.p. gasoline	5.875– 6.375	5.875– 6.375	5.875– 6.375
60-62 400 e.p. gasoline	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
64-66 390 e.p. gasoline	6.50 – 6.75	6.75	6.75
64-66 375 e.p. gasoline	6.875– 7.00	6.875– 7.00	6.875– 7.125
68-70 350-360 e.p. gasoline	7.125– 7.375	7.125– 7.375	7.125– 7.375
KANSAS (F. O. B. refinery Kansas destination)			
58-60 U. S. Motor 437 e.p.	6.125– 6.375	6.125– 6.375	6.25 – 6.375
60-62 400 e.p. gasoline	6.75	6.75 – 7.00	6.75 – 7.00
64-66 375 e.p. gasoline	7.375	7.375– 7.50	7.375– 7.50
NORTH TEXAS			
48-52 450 e.p. naphtha	†5.50	†5.625– 5.75	†5.75
56-58 450 e.p. gasoline	†5.50	†5.75	†5.75
58-60 450 e.p. gasoline	†5.50	5.75	5.75
58-60 U. S. Motor 437 e.p.	†5.625– 5.75	†5.625– 5.875	†5.75 – 6.00
60-62 400 e.p. gasoline	6.125– 6.375	6.125– 6.375	6.125– 6.375
64-66 390 e.p. gasoline	6.50	6.625–6.75	6.625– 6.75
64-66 375 e.p. gasoline	6.625– 6.875	6.875– 7.00	6.875– 7.00
68-70 350-360 e.p. gasoline	7.125– 7.25	7.125– 7.25	7.125– 7.25
NORTH LOUISIANA (For Louisiana and differential territory destination)			
58-60 U. S. Motor gasoline	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
ARKANSAS (For Arkansas intrastate shipment)			
56-58 450 e.p. gasoline	6.25	6.25	6.25
58-60 450 e.p. gasoline	6.25	6.25	6.25
58-60 U. S. Motor 437 e.p.	6.375	6.375	6.50
ARKANSAS (F. O. B. Arkansas refineries for interstate shipment)			
58-60 U. S. Motor 437 e.p.	**6.25	**6.25	**6.25
CALIFORNIA			
*54-58 U.S. Motor 437 e.p.	7.00 – 8.50	7.00 – 8.50	7.00 – 8.50
*58-61 U.S. Motor 437 e.p.	8.00 – 9.50	8.00 – 9.50	8.00 – 9.50
*42-45 Eng. dis. 445-480 e.p.	6.50 – 7.00	6.50 – 7.00	6.50 – 7.00

*2c tax to be added if used in state.

NATURAL GASOLINE

(Note: End point of all grades, not over 375° F. Since Oct. 1, 1927 all naturals must pass corrosion test.)

OKLAHOMA			
Grade AA, 80-87.9, 90% Recovery	5.125– 5.25	†5.00	†4.875– 5.00
Grade A, 72-79.9, 90% Recovery	†5.375	†5.25	†5.25
Grade BB, 84-92, 85% Recovery	4.00	†4.00 – 4.25	†4.00 – 4.25
Grade B, 76-83.9, 85% Recovery	†4.25 – 4.50	†4.00 – 4.25	†4.00 – 4.25
Grade C, 80-92, 78% Recovery	3.625– 3.75	†3.50 – 3.625	†3.50
NORTH TEXAS (F. O. B. Breckenridge)			
Grade AA, 80-87.9, 90% Recovery	5.125– 5.25	†5.00	†4.875– 5.00
Grade A, 72-79.9, 90% Recovery	†5.375	†5.25	†5.25
Grade BB, 84-92, 85% Recovery	4.00 – 4.25	†4.125– 4.25	†4.00 – 4.25
Grade B, 76-83.9, 85% Recovery	†4.25 – 4.50	†4.125– 4.25	†4.00 – 4.25
Grade C, 80-92, 78% Recovery	3.75	†3.625	†3.50 – 3.625
NORTH LOUISIANA (F. O. B. Monroe District)			
Grade AA	†5.25 – 5.50	†5.25	†5.50
Grade BB	†4.50 – 4.625	†4.50	†5.00
Grade C	†4.00	†4.00	†4.50
CALIFORNIA			
75-85, 375-390 e.p. blend.	8.00 – 9.00	9.00 –10.00	9.00 –10.00

MOTOR FUEL BLENDS

PENNSYLVANIA			
68-70 Blend 437 e.p.	Prices	.....	.....
64-66 Blend 437 e.p.	temporarily	.....	.....
60-62 Blend 437 e.p.	discontinued	.....	.....
OKLAHOMA			
64-66 Blend 437 e.p.	**5.625– 6.00	**5.625– 6.00	**5.75 – 6.00

BURNING OILS

PENNSYLVANIA			
45 w.w. kerosene	6.25 – 6.50	6.25 – 6.50	6.25 – 6.75
46 w.w. kerosene	6.625– 6.875	6.50 – 6.75	6.625– 7.00
47 w.w. kerosene	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25
OKLAHOMA			
41-43 w.w. kerosene	4.125– 4.375	4.25 – 4.50	4.25 – 4.50
42-44 w.w. kerosene	4.75	4.75 – 4.875	4.75 – 4.875
KANSAS (F. O. B. refinery Kansas destination)			
41-43 w.w. kerosene	4.50 – 5.00	4.75 – 5.25	4.75 – 5.25
42-44 w.w. kerosene	5.50 – 5.625	5.625– 5.75	5.625– 5.75
NORTH TEXAS			
40-42 w.w. kerosene	†4.00	†4.25	†4.25
41-43 w.w. kerosene	†4.125– 4.25	†4.25 – 4.375	4.25 – 4.375
NORTH LOUISIANA (For Louisiana and differential territory destination)			
41-43 w.w. kerosene	4.75 – 5.00	5.00	5.00
ARKANSAS (For intrastate shipment only)			
42-44 kerosene	5.00 – 5.25	5.25	5.25
ARKANSAS (F. O. B. Arkansas refineries for interstate shipment)			
42-44 kerosene	5.00	5.00	5.00
CALIFORNIA			
38-40 w.w. kerosene	5.00 – 5.25	5.00 – 5.50	5.00 – 5.50

NEUTRAL OIL

Vis.			
PENNSYLVANIA	(Viscosity at 70°F.)		
200 No. 3 Assoc. Filt.	33.00 –34.00	33.00 –34.00	32.00 –34.00
180 No. 3 Assoc. Filt.	29.50 –31.00	31.00 –32.00	30.00 –32.00
150 No. 3 Assoc. Filt.	26.50 –27.50	27.00 –27.50	26.25 –27.50
	(Non Viscous)		
34 Grav. 330-340 Flash	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
36 Min. Neut. 300-305 Flash	6.50 – 7.00	6.50 – 7.00	6.50 – 7.00
OKLAHOMA			
Vis. Color	(Viscosity at 100°F.)		
100—No. 2	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
150—No. 3	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
150—No. 4	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
180—No. 3	9.00 –10.00	9.00 –10.00	9.00 –10.00
180—No. 4	9.50 – 9.75	9.50 – 9.75	9.50 – 9.75
180—No. 5	9.25 – 9.75	9.25 – 9.75	9.25 – 9.75
200—No. 3	9.50 –11.00	9.50 –11.00	9.50 –11.00
200—No. 4	9.50 –10.75	9.50 –10.75	9.50 –10.75
200—No. 5	8.50 –10.50	8.50 –10.50	8.50 –10.50
220—No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220—No. 4	12.25 –12.50	12.25 –12.50	12.25 –12.50
220—No. 5	11.50 –12.00	11.50 –12.00	11.50 –12.00
240—No. 3	13.50 –14.00	14.00	14.00
240—No. 4	13.25 –13.50	13.25 –13.50	13.25 –13.50
240—No. 5	12.00 –13.00	12.00 –13.00	12.00 –13.00
280—No. 3	15.50 –16.50	15.50 –16.50	15.50 –16.50
280—No. 4	15.25	15.25	15.25
280—No. 5	14.00 –15.00	14.00 –15.00	14.00 –15.00
300—No. 5-6	17.00	17.00	17.00
GULF COASTAL			
Vis. Color	(Viscosity at 100° F., pour test 0)		
100—No. 2 Unfilt. Pale	6.50 – 7.00	6.50 – 7.00	6.50 – 7.00
200—No. 3 Unfilt. Pale	9.00 –10.00	9.00 –10.00	9.00 –10.00
300—No. 3 Unfilt. Pale	10.00 –11.00	10.00 –11.00	10.00 –11.00
500—No. 3½ Unfilt. Pale	12.00 –13.00	12.00 –13.00	12.00 –13.00
750—No. 4 Unfilt. Pale	14.00 –15.00	14.00 –15.00	14.00 –15.00
200—No. 5½ Red Oil	7.00 – 8.00	7.00 – 8.00	7.00 – 8.00
300—No. 5½ Red Oil	8.00 – 9.00	8.00 – 9.00	8.00 – 9.00
500—No. 6 Red Oil	9.50 –10.50	9.50 –10.50	9.50 –10.50
750—No. 6 Red Oil	12.00 –13.00	12.00 –13.00	12.00 –13.00
CALIFORNIA			
Vis. Color	(Viscosity at 100°F.)		
100—No. 2	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
100—No. 3	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00
200—No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
300—No. 3	10.50 –11.00	10.50 –11.00	10.50 –11.00
450—No. 3-3½	13.00 –13.50	13.00 –13.50	13.00 –13.50
550—No. 3-3½	14.50 –15.00	14.50 –15.00	14.50 –15.00
600—No. 3-3½	15.00 –15.50	15.00 –15.50	15.00 –15.50
100—No. 5	6.50	6.50	6.50
200—No. 5	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
300—No. 5	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
400—No. 5	11.00 –11.50	11.00 –11.50	11.00 –11.50
500—No. 5	11.00 –11.50	11.00 –11.50	11.00 –11.50
600—No. 5	12.00 –12.50	12.00 –12.50	12.00 –12.50
700—No. 7	14.00 –14.50	14.00 –14.50	14.00 –14.50

CYLINDER STOCKS

OKLAHOMA			
190-200 Vis. at 210° Brt. St.	31.00 –32.00	31.00 –32.00	31.00 –32.00
150-160 Vis. at 210° Brt. St.	23.00 –25.00	23.00 –25.00	23.00 –26.00
600 E St. 140-150 Vis.-210°	17.00 –18.00	17.00 –18.00	17.00 –18.00
600 St. Ref. Olive Green	9.00 –10.00	9.00 –10.00	9.00 –10.00
600 St. Ref. Dark Green	7.00 – 8.00	7.00 – 8.00	7.00 – 8.00
Black Oil	5.00	5.00	5.00
PENNSYLVANIA	(1-inch Immersion Test)		
600 Steam Refined	9.00 –10.00	9.50 –10.50	9.50 –10.50
650 Steam Refined	11.25 –12.25	11.50 –12.50	11.50 –12.50
600 Flash	16.00 –16.50	16.00 –16.50	16.00 –16.50
625 Flash	27.00 –27.50	27.00 –27.50	27.00 –27.50
600 Warren E	17.00 –19.00	17.00 –19.00	17.00 –19.00
600 Oil City E	15.50 –16.50	15.50 –16.50	15.50 –16.50
600 D Filtered	24.50 –25.50	24.50 –25.50	24.50 –25.50
Cold Test Stock. 40-50 p. p., 140-150 vis. at 210°, 540-550 flash, No. 8 color	28.00 –29.50	29.00 –30.00	28.50 –30.00
40-50 p.p., 140-150 vis. at 210, 540-550 flash, No. 6-6½ color diluted	26.00 –27.50	27.00 –28.00	27.00 –28.00

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher)

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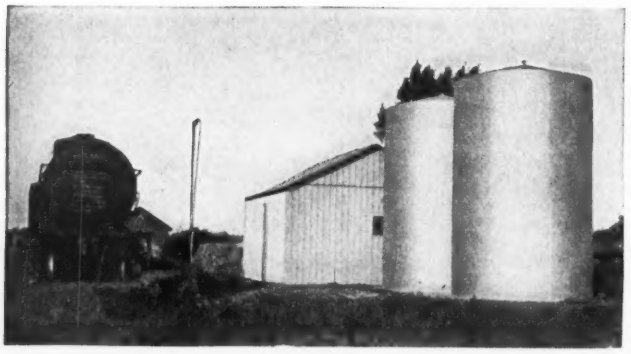

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Refinery Markets on Wax and Heavy Oil Products

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown
(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

WAX

PENNSYLVANIA	Prices Jan. 16	Prices Jan. 9	Prices Jan. 3
Per Pound, New York			
122-124 white crude scale	3.00 – 3.25	3.00 – 3.125	3.00
124-126 white crude scale	3.125– 3.25	3.00 – 3.125	3.00
OKLAHOMA			
**124-126 Semi-refined..	2.50 – 2.75	2.50 – 2.75	2.50 – 2.75
CALIFORNIA			
White crude scale, per pound, ton lots.....	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50

FUEL OIL

PENNSYLVANIA			
36-40 fuel oil.....	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
30-34 fuel oil.....	4.625– 4.75	4.625– 4.75	4.625– 4.75
28-32 fuel oil.....	4.625– 4.75	4.625–4.75	4.625– 4.75
OKLAHOMA			
38-40 straw distillate.....	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
36-38 straw distillate.....	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125
*32-36 gas oil, straw.....	†2.50 – 2.75	†2.50 – 2.75	†2.50
*32-36 dark gas oil.....	2.375– 2.50	2.375– 2.50	2.375– 2.50
28-30 fuel oil (in bbls.)...	$0.925– 0.975	$0.925– 0.975	$0.925– 0.975
26-28 fuel oil (in bbls.)...	$0.85 – 0.90	$0.85 – 0.90	$0.85 – 0.90
24-26 fuel oil (in bbls.)...	**$0.80	**$0.80	**$0.80
22-26 fuel oil (in bbls.)...	**$0.75– 0.775	**$0.75– 0.775	**$0.75– 0.775
18-22 fuel oil (in bbls.)...	**$0.70– 0.725	**$0.70– 0.725	**$0.70– 0.725
16-18 fuel oil (in bbls.)...	**$0.70	**$0.70	**$0.70
14-16 fuel oil (in bbls.)...	**$0.70	**$0.70	**$0.70

*Zero cold test low flash goods sell for ¼ cent more per gallon.
Zero cold test fuel oils sell for 5 to 15 cents more per bbl.

KANSAS (F. O. B. refinery Kansas destination.)			
38-40 straw distillate.....	3.50 – 3.75	3.50 – 3.75	3.50 – 3.75
36-38 straw distillate.....	3.25	3.25	3.25
32-36 gas oil.....	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
24-26 fuel oil	*$0.90– 0.95	*$0.90 – 0.95	*$0.90 – 0.95
18-22 fuel oil.....	*$0.85	*$0.85	*$0.85
NORTH TEXAS			
38-40 straw distillate.....	3.125– 3.25	3.125– 3.25	3.125– 3.25
32-36 gas oil, cracked....	2.25 – 2.375	2.25 – 2.375	2.25
32-36 gas oil, uncracked..	2.25 – 2.375	2.25 – 2.375	2.25 – 2.375
24-26 fuel oil (in bbls.)...	$0.70	$0.70	$0.70

GULF COASTAL	Prices Jan. 16	Prices Jan. 9	Prices Jan. 3
Fuel (in bbls.).....	$1.40 – 1.50	$1.40 –$1.50	1.40 – 1.50
Gas oil.....	4.375– 4.50	4.375– 4.50	4.375– 4.50
NORTH LOUISIANA (For Louisiana and differential territory destination)			
32-36 gas oil, dark.....	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125
32-36 gas oil, straw.....	3.125– 3.25	3.125– 3.25	3.125– 3.25
16-20 fuel oil (in bbls.) ...	$0.975– 1.00	$1.00	$1.00
ARKANSAS (For Arkansas intrastate shipment only)			
32-36 gas oil, straw.....	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
28-32 gas oil.....	3.00	3.00	3.00
32-36 gas oil.....	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
ARKANSAS (F. O. B. Arkansas refineries for interstate shipment)			
28-32 gas oil.....	2.75	2.75	2.75
Smackover crude fuel....	$0.975– 1.00	$0.975– 1.00	$0.975– 1.00
CALIFORNIA (F. O. B. San Joaquin Valley. At San Francisco, 4c per bbl. more)			
14-18 fuel oil (in bbls.)...	$0.60 –$0.75	$0.60 –$0.75	$0.60 – 0.75
14-18 Bunker oil (in bbls.)	$0.80 –$1.00	$0.80 –$1.00	$0.80 – 1.00
30-34 gas oil (in bbls.)...	$1.05 –$1.10	$1.05 –$1.10	$1.05 – 1.10
27 Plus Diesel oil (in bbls.)	$0.90 –$1.00	$0.90 –$1.00	$0.90 – 1.00

PETROLATUMS

PENNSYLVANIA (In cents per pound in tank cars; in barrels, in car lots ¼c per pound more.)			
Snow White.....	8.875	8.875	8.875
Lily White.....	7.875	7.875	7.875
Cream White.....	6.875	6.875	6.875
Light Amber.....	3.875	3.875	3.875
Amber.....	3.50	3.50	3.50
Red.....	3.25	3.25	3.25
Green No. 5 color.....	2.625	2.625	2.625

**PETROLEUM COKE

Oklahoma

(Per ton in car lots)

Lump.....	$5	$5	$5
Still run.....	$3	$3	$3
Breeze.....	$2	$2	$2

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(*Continued from Page* 105)

remainder of this month. One refiner said today that he had reduced his fuel oil stocks approximately 1,500,000 gallons since the middle of December.

A part of this wave of buying probably can be traced to the action of one large refining company. It has been the policy of this company for the past two or three months to ship low cold test crude oil from its leases in west Texas to its plants in tank cars, top the crude for what gasoline content it contained and sell the residue for fuel oil. The prices obtained by this company were lower than a majority of the Oklahoma refiners were willing to accept for their goods.

This company is understood to have discontinued shipping this crude via tank cars and now is running the material via pipe line to Gulf port terminals. The buying of fuel oils in this district meanwhile has caused a slight scramble for fuel oil cars, and especially steam coil cars. There has been no actual shortage so far, the trade reports, although a few said they had found it increasingly difficult to obtain the cars.

LOS ANGELES, Jan. 14.—C. C. Wheeler, connected with the Robinson Orifice Fitting Co. of Los Angeles, left Jan. 12 for a visit in Tulsa.

White Crude Scale Price Advances at Gulf

NEW YORK, Jan. 14.—A fairly active demand from South American buyers brought slightly higher prices for white crude scale wax at New Orleans this week. Fully refined grades were in little demand but reports that stocks in the Mid-Continent were exceptionally low tended to maintain prices. It was also pointed out in some quarters that greatly reduced production with subsequent lowering of stocks of scale was partially accountable for the advance in New Orleans prices for this class of goods.

Several small lots of white crude scale sold at 3 to 3.125 cents a pound with fully refined quoted approximately 1 cent higher by the majority of refiners.

Activity in the New York market continued slow. United Kingdom buyers expressed little interest in the market, although it was indicated in quarters that some sizable orders were about to be placed if the right prices, as the buyer expressed it, could be done.

Interests in the market were greatly at variance in their ideas of prices. One or two sellers asserted they had been unable to get 3 cents a pound for white crude scale. On the other hand, a broker with an order to buy 1,000 tons of this commodity at 3 cents reported he was unsuccessful in finding a seller at this price. Prices as high as 3.125 and 3.25 cents were heard in several quarters. Early in the week a large United Kingdom buyer picked up a few odd lots at 3 cents, but aside from this there were few if any transactions reported that would influence the market.

Foreign Lube Demand Is Quiet

NEW YORK, Jan. 14.—The foreign demand for lubricating oils was generally slow this week and with the exception of one or two items, prices in all markets were without material change.

Pennsylvania 600 steam refined was offered 0.5 cent lower this week at 16.50 cents a gallon in barrels at New York. In some quarters it was indicated that better than 18.50 cents might be done on 650 steam refined goods, but firm offers as in the case of 600 steam refined were lacking.

Western bright stock, 150 vis. at 210, was purchased 1-cent lower at 22 cents a gallon, f.o.b. Group 3, by a large exporter in New York early this week. Other Mid-Continent oils, however, were reported generally unchanged in price.

Chicago Gasoline Demand Better; U. S. Motor Price Unchanged

Staff Special
CHICAGO, Jan. 14

GASOLINE demand was reported somewhat better this week in Chicago market. Most sellers had a steady volume of small orders. Nearly all sellers reported gasoline business was average for this season of the year. Demand for domestic burner oils was steady. Several large refiners were reported to be sold up on zero fuel oils until the end of the month, and others were considerably behind on shipments.

Most 58-60 U. S. Motor gasoline moved this week at 5.625 to 6 cents as it did during final days of last week. A considerable volume of goods moved at 5.50 cents and on the other hand one refiner continued to ask 6.125 cents. U. S. Motor gasoline for shipment into Ohio points was going as low as 5.125 cents on a Group 3 freight basis.

The higher gravity gasolines moved fairly well this week. Some of the trade reported a better demand for the 64-66, 375 and 60-62, 400 e.p. grades than for U. S. Motor. The 60-62, 437 e.p. gasoline moved mostly at 5.875 to 6.25 cents throughout the week. Gasoline of 60-62 gravity, 400 end point has been declining gradually and was about ¼ cent lower in price at end of the week. It sold at 6.50 to 6.625 cents Monday, 6.375 to 6.625 cents Tuesday, at 6.375 to 6.50 cents Wednesday and Thursday, and at 6.25 to 6.50 cents on Saturday. Most sales of 64-66, 375 e.p. continued at 6.875 to 7 cents, although considerable goods moved at 6.75 cents.

Little demand was reported for 41-43 w.w. kerosene. Prices were somewhat lower after the middle of the week. Most sales were made at 4.25 to 4.50 cents on Monday and Tuesday and at 4.25 to 4.375 cents thereafter. Some sales were reported at 4.125 cents.

Distillate prices were unchanged this week. Demand continued steady. The majority of the trade still quoted 3.25 to 3.375 cents on 38-40 straw.

Prices on all grades of gas oil were unchanged over the week. Ordinary dark 32-36 gas oil continued to sell mostly at 2.50 cents with sales reported at 2.375 and 2.625 cents. Gas oil of like gravity and color with a zero cold test sold mostly at 2.875 to 3 cents. The 32-36 straw zero gas oil sold at 3.125 to 3.25 cents throughout the week.

Fuel oil prices were generally at the same level as those prevailing last week. The 28-30 fuel continued to sell mostly at $1.00 to $1.05 with some zero cold test goods moving at higher prices. Fuel of 24-26 gravity sold at $0.80 to $0.85 and 22-26 at $0.80 to $0.825. Most of the trade reported that 18-22 fuel oil with a zero cold test was comparatively scarce and prices on this grade were firm. Most sales of 18-22 fuel were made at $0.775 to $0.80, with some sales reported up to $0.85. Quotations on Smackover crude fuel continued at $1.00 to $1.025.

Much colder weather will prevail over entire Standard of Indiana territory during the first half of next week, followed by warmer weather during the latter half, probably two or three precipitation periods will occur during the week, is the weather bureau forecast.

Smith-Weihman Trading in Wax

NEW YORK, Jan. 14.—Smith-Weihman Co., 15 Moore St., New York City, importers and exporters, has established a department for the trading of paraffin wax, oils, tallows, and greases. M. J. McCarthy, for 12 years connected with J. C. Francesconi & Co., wax brokers, has been placed in charge of the new department.

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Week's Price Changes Tank Wagon Markets

Gasoline Changes

Standard of New York—T. w. and s. s. prices gasoline reduced 2 cents, Buffalo, to 13 cents and 16 cents respectively, **Dec. 30.**

S. s. price only of gasoline reduced 2 cents, Boston, to 15 cents, **Jan. 13.** T. w. remains unchanged at 17 cents.

Continental Oil—T. w. and s. s. prices gasoline advanced ½-cent, Butte, both to 22 cents, including 3 cents state tax, **Jan. 10.**

* * *

Kerosene Changes

Magnolia Petroleum—The 10 cent price of kerosene at Fort Smith, published in the tank wagon table of the Jan. 11 issue, went into effect **Jan. 3.** It was a cut of 2 cents.

T. w. and s. s. prices gasoline reduced 2 cents, Muskogee, to 13 cents and 16 cents respectively, including 3 cent tax, **Jan. 4.** T. w. price reduced 1 cent, s. s. price 3 cents, Texarkana, to 15 cents and 18 cents respectively, including 3 cent Texas tax, **Jan. 11.**

Cyril Plant To Resume Operations Feb. 5

OKLAHOMA CITY, Jan. 16.—The Anderson Prichard Oil Corp. expects to be able to re-open its Cyril, Okla., refinery by about Feb. 5. New towers and other damaged equipment are now en-route to Cyril for installation.

During the extreme cold weather at the first of the year a fuel line broke at the plant causing a fire which destroyed fractionating towers and damaged the heat exchanger and condenser box equipment. Due to the extreme low temperatures at the time of the fire and the fact that the blaze was in the open, the plant force had a difficult time putting out the blaze. Chemicals only could be used.

Fortunately the company's stocks of technical naphthas were not destroyed by the fire and shipments are going out on schedule. The Anderson Prichard Oil Corp. specializes in the production of special naphthas for the rubber, paint and varnish and other trades.

Eastern Kentucky Refinery Market

ASHLAND, Jan. 16.—Prices in eastern Kentucky refining district for Jan. 16 and Jan. 9 are:

	Jan. 16	Jan. 9
60-62, 425 e.p. gasoline	8.625	8.625
64-66, 375 e.p. gasoline	8.875	8.875
68-70, 360 e. p. gasoline	9.25	9.25
41-43 kerosene	6.25	6.25
34-36 zero gas oil	4.75	4.75
32-34 zero gas oil	4.50	4.50
24-26 fuel oil	None available	
26-30 zero fuel oil	3.75	.....
28-30 zero fuel oil	4.00	.....
30-32 zero fuel oil	4.25	.....

Tank Wagon, Service Station Markets for Gasoline and Kerosene In United States Territories and Canada

(As posted by principal marketing companies)

(OIL PRICE HANDBOOK has t.w. and s.s. markets for whole year arranged for quick reference)

These Prices In Effect January 16, 1928

S.O. NEW JERSEY TERRITORY

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
Atlantic City, N. J.	16	2	18	20	14
Newark, N. J.	16	2	18	20	14
Annapolis, Md.	16	4	20	23	12
Baltimore, Md.	16	4	20	23	10
Cumberland, Md.	16	4	20	23	14
Washington, D. C.	16	2	18	21	12
Danville, Va.	16	4½	20.5	*	14
Norfolk, Va.	16	4½	20.5	23.5	12
Richmond, Va.	14	4½	18.5	21.5	14
Roanoke, Va.	16	4½	20.5	23.5	14
Petersburg, Va.	16	4½	20.5	23.5	14
Charleston, W. Va.	16	4	20	23	14
Keyser, W. Va.	16	4	20	*	14
Parkersburg, W. Va.	13	4	17	20	14
Wheeling, W. Va.	16	4	20	23	14
Charlotte, N. C.	16	4	20	23	14
Hickory, N. C.	16	4	20	23	14
Mt. Airy, N. C.	16	4	20	23	14
Salisbury, N. C.	16	4	20	23	14
Charleston, S. C.	15	5	20	23	14
Columbia, S. C.	15	5	20	23	14

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

*New York City	17	0	17	21	15
Albany, N. Y.	13	0	13	15	15
Buffalo, N. Y.	13	0	13	16	14
†Rochester, N. Y.	13	0	13	16	13
Syracuse, N. Y.	15	0	15	15	15
Boston, Mass.	17	0	17	15	15
Augusta, Me.	17	4	21	21	15
Manchester, N. H.	17	4	21	23	15
Burlington, Vt.	17	3	20	22	15

*In steel barrels.

†It is reported that S. O. New York is selling a second grade of gasoline at Rochester, 4c below the above posted prices which apply on its Socony grade.

ATLANTIC REFINING

Pittsburgh, Pa.	16	*	16	*22	14
Philadelphia, Pa.	15	*	15	*21	14
Allentown, Pa.	16	*	16	*22	14
Erie, Pa.	12	*	12	*18	14
Scranton, Pa.	16	*	16	*22	14
Altoona, Pa.	16	*	16	*22	14
Dover, Del.	16	3	19	22	14
Wilmington, Del.	16	3	19	22	14
Providence, R. I.	17	2	19	19	15
Boston, Mass.	17	0	17	17	15
Springfield, Mass.	18	0	18	18	15
Worcester, Mass.	17	0	17	17	15
Hartford, Conn.	18	2	20	20	15
New Haven, Conn.	18	2	20	20	15

*3-cent state tax is collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	13	5	18	21	15.5
Louisville, Ky.	13	5	18	21	15
Covington, Ky.	14	5	19	22	15.5
Clarksdale, Miss.	13	4	17	20	11.5
Gulfport, Miss.	††14.5	4	††18.5	21.5	14
Jackson, Miss.	13	4	17	20	13.5
Natchez, Miss.	12.5	4	16.5	19.5	14
Vicksburg, Miss.	12.5	4	16.5	19.5	14
Birmingham, Ala.‡	14	4	18	21	14.5
Mobile, Ala.‡	14	4	18	21	14
Montgomery, Ala.*‡	12	4	16	16	15.5
Atlanta, Ga.	13	4	17	19	†14
Augusta, Ga.	15	4	19	22	†16.5
Macon, Ga.	12	4	16	19	†13.5
Savannah, Ga.	13	4	17	19	†14.5
Jacksonville, Fla.°	13	5	18	21	11.5
Miami, Fla.°	15	5	20	23	14.5
Tampa, Fla.°	13	5	18	21	13
Pensacola, Fla.°	**14	5	**19	22	13

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

‡Alabama gasoline prices include 1/40 of 1c inspection fee. Mobile gasoline prices include 1c city tax.

†Georgia kerosene prices include 1c state tax.

°Florida gasoline prices include ½c inspection fee.

**Both tank wagon prices include 1c city tax at Pensacola, which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

S. O. INDIANA

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
Chicago, Ill.	14	2	16	18	12
Decatur, Ill.	11.5	2	13.5	15.5	12.1
E. St. Louis, Ill.	13.1	2	15.1	17.35	11.2
Joliet, Ill.	14.4	2	16.4	18.4	12.3
Peoria, Ill.	10	2	12	12	12.1
Quincy, Ill.	14.2	2	16.2	18.2	11.9
Indianapolis, Ind.	11.2	3	14.2	15.2	13.2
Evansville, Ind.	14	3	17	19	13
South Bend, Ind.	14.4	3	17.4	17.4	13.4
Detroit, Mich.	12.8	3	15.8	17.8	13.7
Grand Rapids, Mich.	11	3	14	16	13.6
Saginaw, Mich.	14.9	3	17.9	19.9	13.8
Green Bay, Wis.	14.6	2	16.6	18.6	12.4
Madison, Wis.	14.3	2	16.3	18.3	12.1
Milwaukee, Wis.	14.1	2	16.1	18.1	11.9
La Crosse, Wis.	15.2	2	17.2	19.2	13
Minneapolis, Minn.	12	2	14	14	12.9
Duluth, Minn.	13.5	2	15.5	17.5	12.9
Mankato, Minn.	12.1	2	14.1	16.1	12.7
Des Moines, Ia.	11.9	3	14.9	16.9	12.3
Davenport, Ia.	12.5	3	15.5	17.5	12.3
Sioux City, Ia.	14.1	3	17.1	19.1	11.9
Mason City, Ia.	14.5	3	17.5	19.5	12.3
St. Louis, Mo.	*13.6	2	15.6	17.9	11.3
Kansas City, Mo.	†12.9	2	14.9	16.9	10.6
St. Joseph, Mo.	†12.5	2	14.5	16.5	11.2
Fargo, N. D.	13	2	15	17	14.9
Grand Forks, N. D.	17.2	2	19.2	21.2	15.2
Minot, N. D.	16.9	2	18.9	20.9	14.9
Pierre, S. D.	15.5	4	19.5	21.5	13.9
Huron, S. D.	15.5	4	19.5	21.5	13.9
Wichita, Kans.	10.8	2	12.8	12.8	10.8
Bartlesville, Okla.	12.8	3	15.8	17.8	10.8

S. O. Indiana's quantity discount schedule on tank wagon deliveries of gasoline outside the city of Chicago is 1c for 50 gals. or more at one delivery; 1½c for 6,000 gals. or more a month; 2c for 10,000 gals. or more a month, and 3c for 15,000 gals. or more a month.

In Chicago, above discounts apply, except that minimum required quantity to get the 1c discount is 100 gals., instead of 50 gals. This 1c discount applies on quantities of 100 gals. and over, in addition to regular Q.D.A. discounts applying thru rest of territory, as stated above.

Service station discount is 2c per gal. to consumers of 200 gals. or more a month, or 2400 gals. per year.

Discount on kerosene is 1c on 50 gal. dumps throughout territory.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. NEBRASKA

Omaha, Neb.	14.25	2	16.25	16.25	12.25
McCook	12.75	2	14.75	16.75	11.50
Norfolk	14.75	2	16.75	18.75	12.75
North Platte	15.75	2	17.75	19.75	13.50
Scottsbluff	15.25	2	17.25	19.25	13.00

CONTINENTAL OIL

Denver, Colo.	13	3	16	18	12.5
Pueblo, Colo.	13	3	16	18	14.5
Grand Junction, Colo.	17.5	3	20.5	22.5	18
Casper, Wyo.	14	3	17	19	13
Cheyenne, Wyo.	15	3	18	20	14.5
Butte, Mont.	19.5	3	22.5	22.5	19
Helena, Mont.	19.5	3	22.5	24.5	19
Salt Lake City, Utah	16.5	3½	20	21	17
Boise, Ida.	19.5	4	23.5	25.5	19
Twin Falls, Ida.	19.5	4	23.5	25.5	19
Albuquerque, N. M.	16	5	21	24	17

S. O. CALIFORNIA*

Phoenix, Ariz.	19	4	23	27	21.5
Los Angeles, Cal.	13.5	3	16.5	20.5	15.5
Fresno, Cal.	14	3	17	21	16.5
San Francisco, Cal.	14	3	17	21	15.5
Reno, Nev.	18	4	22	26	19
Portland, Ore.	14.5	3	17.5	21.5	16.5
Seattle, Wash.	14.5	2	16.5	20.5	16.5
Spokane, Wash.	18.5	2	20.5	24.5	20.5
Tacoma, Wash.	14.5	2	16.5	20.5	16.5

*On Oct. 1, t.w. price at all points for spot sales, was advanced 1c. Very large portion of deliveries are under contract carrying above prices. New customers signing contracts and selling only one brand of gasoline, are given prices published in above table.

S. O. LOUISIANA

Little Rock, Ark.	11	5	16	16	11
Alexandria, La.	13	2	15	18	†14
Baton Rouge, La.	12	2	14	17	†12.5
Lake Charles, La.	13.5	2	15.5	18.5	†14
New Orleans, La.	13.5	2	*15.5	*18.5	†14
Shreveport, La.	13.5	2	15.5	18.5	†13
Lafayette, La.	13	2	15	18	†13.5
Bristol, Tenn.	16	3	19	22	14
Chattanooga, Tenn.	16.5	3	19.5	22.5	15
Knoxville, Tenn.	16.5	3	19.5	22.5	15
Nashville, Tenn.	15	3	18	21	15
Memphis, Tenn.	12	3	15	16.5	14

*New Orleans gasoline prices include 1c parish tax in addition to 2c state tax, and kerosene prices include 1c state tax and 1c parish tax.

†Kerosene price in Louisiana includes 1c state tax.

S. O. OHIO

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W
All Ohio points	14	3	17	19	14

MAGNOLIA PETROLEUM

Muskogee, Okla.	10	3	13	16	10
Oklahoma City	10	3	13	14	10
Tulsa, Okla.	10	3	13	14	10
Fort Smith, Ark.*	13	*3	16	19	10
Little Rock, Ark.	11	5	16	16	11
Texarkana, Ark. *	12	*3	15	18	12
Dallas, Tex.	11	3	14	17	11
Fort Worth, Tex.	11	3	14	16	10
Houston, Tex.	10	3	13	15	15
San Antonio, Tex.	10	3	13	15	10
El Paso, Tex.	11	3	14	15	16

*Within City of Texarkana and Fort Smith, the state tax on gasoline is 3c per gal. conforming with the Texas state tax. In these two districts outside of the city the 5c Arkansas tax applies.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M. & P. Naphtha	Cleaner Naphtha
Chicago	16	18	18
Detroit	17.7	19.7	19.7
Kansas City	†16.2	†18.2	†18.2
Milwaukee	16.7	*20.7	*20.7
Minneapolis	*20	*22	*22
St. Louis	15.9	17.9	17.9
New York	...	19	....

*Includes 2c state tax.

†Includes 1c city tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

	Gasoline				Oil
			Total		
	T.W.	Tax	T.W.	S.S.	T.W.
Toronto	19.5	3	22.5	26	21
Ottawa	19.5	3	22.5	26	21
Cochrane	24.5	3	27.5	36	26
Ft. William	24.5	3	27.5	31	23.5

MANITOBA

Winnipeg	24.5	3	27.5	31	23.5

SASKATCHEWAN

Regina	27.5	0	27.5	32	26.5

ALBERTA

Edmonton	26.5	3	29.5	33	25.5
Calgary	22.5	3	25.5	29	23.5

BRITISH COLUMBIA

Vancouver	21	3	24	28	22

QUEBEC

Montreal	20.5	3	23.5	27	21
Quebec City	22.5	3	25.5	31	23
Three Rivers	22.5	3	25.5	30	23

NEW BRUNSWICK

St. John	24.5	3	27.5	32	24
Moncton	24.5	3	27.5	32	24

NOVA SCOTIA

Halifax	24.5	3	27.5	32	24
Sydney	24.5	3	27.5	32	24

PRINCE EDWARD ISLAND

Charlottetown	24.5	3	27.5	31	24

Note: In districts surrounding these points 1c additional is added to city price.

Eastern Gasoline Demand Steady; Prices Unchanged

Staff Special
NEW YORK, Jan. 14

EASTERN gasoline markets passed an uneventful week with prices in all northern seaboard markets showing virtually no change over last Saturday. Exceptionally mild weather for the season kept consumption relatively high and a steady demand from the jobbing trade for one and two car shipments was reported by the majority of sellers.

Activity in the light burning oil market subsided somewhat in view of the warmer weather, but the trade took this as a matter of course, and generally speaking pessimism was absent from this section of the market.

Sellers pointed out that, with a decrease in burning oil consumption, greater demand for gasoline results, and vice-versa, and thereby their shipments of refined oils as a whole have held up remarkably well.

The one disturbing feature in the market was the appearance again of low priced bunker oil. Standard Oil Co. of New Jersey's posted price for Grade C remained unchanged at $1.35 a barrel, plus 6.5 cents for lighterage, whereas $1.20 was being quoted in one or two directions and it was indicated that $1.10 might be done on firm bid. Confirmation of business placed at the latter figure, however, was lacking. The low priced oil did not come as much of a surprise to a good many of the trade in view of the low prices prevailing at the Gulf.

Occasional cars of U. S. Motor gasoline sold at below 8 cents, f.o.b. New York harbor refineries, but a a careful survey of market disclosed that goods moving at this figure was greatly in the minority. There was considerable discussion among the trade as to the volume of goods involved at this price, but for the most part the trade discredited the reports that it was sufficient to be representative of the general market.

A large marketer whose shipments average between a million and a million and a half gallons monthly reported that not a car of their gasoline had sold at less than 8 cents since the market had struck this level. They have had no complaints from customers on the 8 cent price and for this reason are convinced that 7.75 cent gasoline is the exception rather than the rule. A number of refiners asserted they still have an 8.25 cent price.

The Philadelphia market likewise was generally unchanged at 8.25 cents for regular grade of U. S. Motor gasoline. The one refiner in this vicinity offering California U. S. Motor reported no change in his price of 8.50 cents, although he indicated they were not getting much business at this figure.

Prices at Baltimore were steady at 8 to 8.25 cents for U. S. Motor and 8.50 cents flat for the California grade. At Norfolk, 8 cent gasoline appeared on the market for the first time in several weeks. One refiner offered U. S. Motor in tank cars at this figure whereas others asked 8.25 cents.

There was generally no change in kerosene prices in any of the seaboard markets. Water white, 43-45 gravity goods stood at 7 to 7.50 cents, Bayonee, Philadelphia and Baltimore, and 7.50 cents flat in the New England district.

Furnace oil and gas oil also were largely unchanged in price.

French Buyer Places Two Orders For 145,000 Bbls. at Gulf

Staff Special
NEW YORK, Jan. 14

ACTIVE interest on the part of foreign buyers which has been anticipated for some time past developed this week with the result that orders for well over 145,000 barrels of light oil were placed at the Gulf for fairly prompt shipment. French buyers were the most active although it was indicated United Kingdom buyers, anticipating their spring requirements, were about ready to enter the market in earnest.

Competition for the business closed was exceptionally keen and it was generally conceded this fact was responsible for the reduction in prices for gasoline and kerosene. Toward the end of the week several more inquiries were in the market and suppliers were largely of the opinion that with a good portion of the distress goods out of the way, prices would soon show an upward reaction.

The buying this week was confined entirely to one French concern. Early in the week this account purchased 65,000 barrels of gasoline and kerosene for Jan. 20-Feb. 10 lifting at the Gulf. Of the total approximately 42,000 barrels was 64-66, 375 end point gasoline which sold at 8.375 cents, 15,000 barrels of U. S. Motor which brought 7 cents and 8,000 barrels of 41-43 prime white kerosene which sold at 5.75 cents. The foregoing prices represented 0.25-cent reductions on U. S. Motor and the kerosene.

Around the middle of the week, the same buyer closed a deal involving approximately 75,000 barrels of 64-66, 375 end point gasoline, 41-43 prime white and 44 water white kerosene for last half of February-first half of March loading. The prices obtained were 8.125 cents, 5.625 cents and 6.625 cents, respectively. When the information first became known, these prices were a great surprise to a number of the trade, but it later developed that at least five suppliers quoted approximately the same prices as the foregoing.

A number of French inquiries circulated in the market early in the week were later withdrawn.

The same French buyer who purchased two cargoes this week was inquiring for a third for Feb. 15-March 15 shipment to comprise in the neighborhood of 42,000 barrels of 64-66, 375 end point gasoline and water white kerosene.

Two inquiries for full cargoes of water white and prime white kerosene also were in the market. This commodity has not been purchased freely of late in full cargo lots, and there was some question as to prices that might be obtained for this class of business. Water white, however, was offered firm at 6.75 cents this week.

Only nominal interest has been displayed in the gas oil market at the Gulf for several weeks, but prices have remained fairly steady. A buyer received an option on approximately 33,000 barrels of French specification gas oil at around 4.50 cents, north Atlantic, but up to the end of the week had failed to secure space at a satisfactory price.

A 5 to 10 cent per barrel drop was noted in prices for Grade C bunker oil. Nine gravity oil was offered at $0.90 cents a barrel and 15-17 gravity oil was quoted approximately 5 cents a barrel higher. No change was noted in bunkering prices, although it was reported there was little business being placed at last week's high of $1.20.

R. W. Walsh Goes West for Month

NEW YORK, Jan. 14.—R. W. Walsh, president of Walburn Petroleum Co. Inc., New York City, left this week for a month's stay in California. Mr. Walsh plans to make the trip a combination of pleasure and business and hopes the Atlantic's icy blasts will have subsided before he returns to the East.

Complete Seaboard Market

(Export markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the years 1924-1925-1926-1927)

Eastern Domestic Market

(Prices for tank car lots, f.o.b. refinery or seaboard terminal, represent majority of quotations and sales.)

	Jan. 16	Jan. 9	Jan. 3
U.S. Motor gasoline, New York harbor	8.00 – 8.25	8.00 – 8.25	8.00 – 8.25
U.S. Motor gasoline, Philadelphia	8.25	8.25	8.25
U.S. Motor gasoline, New England	8.00	8.00	8.00
U.S. Motor gasoline, Baltimore	8.00 – 8.25	8.00 – 8.25	8.00 – 8.25
U.S. Motor gasoline, Norfolk	8.00 – 8.25	8.25	8.25
U.S. Motor gasoline, †Wilmington, N. C.	8.25	8.25	8.25
U.S. Motor gasoline, Charleston	8.00	8.00	8.00
U.S. Motor gasoline, Savannah	7.50 – 7.75	7.50 – 7.75	7.75
U.S. Motor gasoline, Jacksonville	7.25 – 7.75	7.50 – 7.75	7.50 – 7.75
California U.S. Motor gasoline, Baltimore	8.50	8.50	8.50
California U.S. Motor gasoline, Philadelphia	8.50	8.50	8.50
Water white kerosene, New York Harbor	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
Water white kerosene, Philadelphia	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
Water white kerosene, Baltimore	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
Water white kerosene, New England	†7.50	†7.50	†7.50
28-34 gas oil, New York harbor	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
28-34 gas oil, New England	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
38-42 furnace oil, New York harbor	6.00	6.00	6.00
36-40 furnace oil, New England	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00
Grade C bunker oil, New York harbor	$1.20 – 1.35	$1.35	$1.35
Grade C bunker oil, New England	$1.35	$1.35 –$1.40	$1.35 –$1.40
Diesel oil, New York harbor	$2.10	$2.10	$2.10
MEDICINAL OILS			
Russian 885-890 s.g., 325-330 vis	$0.80 – 0.90	$0.80 – 0.90	$0.80 – 0.90
Russian 870-875 s.g., 150-155 vis	$0.67 – 0.77	$0.67 – 0.77	$0.67 – 0.77
Russian 860-865 s.g., 80-85 vis	$0.65 – 0.75	$0.65 – 0.75	$0.65 – 0.75

†Only one refiner quoting.

New York Export Market

(Gasoline and kerosene in cases in bulk. Lubricating oils are per gal. in bbls. Cylinder oils are Penna. products.)

	Jan. 16	Jan. 9	Jan. 3
U. S. Motor gasoline	23.90	23.90	23.90
43-45, 150 w.w. kerosene	18.15	18.15	18.15
42-44, 110 s.w. kerosene	17.15	17.15	17.15
CYLINDER OILS			
Bright stock, dark	34.00 –35.00	34.00 –35.00	35.00 –36.00
600 D filtered	30.00	30.00	30.00 –31.00
600 Warren E filtered	24.00 –25.00	24.00 –25.00	25.00 –26.00
600 s.r. unfiltered	16.50 –17.00	17.00	17.00
650 s.r. unfiltered	18.50 –19.00	18.50 –19.00	18.50 –19.00
600 flash s.r.	20.00 –21.00	20.00 –21.00	20.00 –21.00
630 flash, s.r.	33.00	33.00	33.00
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	20.00	20.00	20.00
250 vis. No. 6 color	19.00	19.00	19.00
200 vis. No. 6 color	18.50	18.50	18.50
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¾ color	24.00	24.00	24.00
180 vis. No. 3¼ color	20.00	20.00	20.00
100 vis. No. 2¼ color	15.75	15.75	15.75
MOTOR OILS (Vis. 100°)			
600 vis. No. 7 color	35.00	35.00	35.00
500 vis. No. 6½ color	33.00	33.00	33.00
400 vis. No. 7¼ color	31.00	31.00	31.00
300 vis. No. 6 color	30.00	30.00	30.00
200 vis. No. 3¼ color	24.00	24.00	24.00
MEDICINAL OILS			
875-885 s.g.	$0.80	$0.80	$0.80
865-870 s.g.	$0.70	$0.70	$0.70

WAXES (In cents per pound, f.a.s. carload lots)

WHITE CRUDE SCALE (In barrels)

	Jan. 16	Jan. 9	Jan. 3
122-124 A.m.p.	3.00 – 3.125	3.00 – 3.125	2.75 – 3.00
124-126 A.m.p.	3.00 – 3.125	3.00 – 3.125	2.75 – 3.00
FULLY REFINED (In burlap bags)			
123-125 A.m.p. Phila.	3.75 – 4.00	3.75 – 3.875	3.75
125-127 A.m.p.	3.75 – 4.00	3.75 – 3.875	3.75
128-130 A.m.p.	4.00 – 4.125	4.00	4.00
130-132 A.m.p.	4.25 – 4.50	4.25 – 4.50	4.50
133-135 A.m.p.	5.00	5.00	*5.00 – 5.50
135-137 A.m.p.	5.25 – 5.50	5.25 – 5.50	*5.75 – 6.00
YELLOW CRUDE SCALE			
124-126 A.m.p.	2.75	2.625	2.625

***Prices nominal.**

Gulf Export Market

(F.O.B. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. and over, except where otherwise noted.)

GASOLINE	Jan. 16	Jan. 9	Jan. 3
U. S. Motor	6.75 – 7.00	7.25	7.25
60-62, 400 e.p.	*7.75	*8.00	*8.00
61-63, 390 e.p.	7.875– 8.00	8.25	8.25
64-66, 375 e.p.	8.125– 8.25	8.50	8.50
U. S. Motor, cases (cargoes)	$1.65	$1.65	$1.65
64-66, cases (cargoes)	$1.80	$1.80	$1.80
KEROSENE			
44 water white	6.75	7.00	7.00
41-43 prime white	5.75	6.00	6.00
Water white, cases (cargoes)	$1.60	$1.60	$1.60
Prime white, cases (cargoes)	$1.50	$1.50	$1.50
DOMESTIC GAS & BUNKER OILS			
*26-28 gas oil	4.25	4.25	4.125– 4.25
*30-32 gas oil	4.25	4.25	4.25
Grade C bunker oil	$1.15	$1.15 –$1.20	$1.20 –$1.25
Grade C bunker oil, cargoes	$0.90 –$0.95	$0.95 –$1.00	$1.00

***Translucent thru neck of 4 oz. bottle.**

MEXICAN CRUDE AND BUNKER OILS (F.O.B. Steamer, Tampico)

Heavy Panuco crude taxes to be paid	$1.10	$1.10	$1.10 –$1.12
Grade C bunker oil, for bunkering purposes, taxes paid	$1.35	$1.35	$1.35

SOUTH TEXAS LUBRICATING OILS (Viscosity at 100° F.; cold test 0) (Tanker, f.o.b. Houston)

100 vis. No. 2 unfiltered pale	6.00	6.00	6.00
200 vis. No. 3 unfiltered pale	7.50 – 8.00	7.50 – 8.00	8.00 – 8.50
300 vis. No. 3 unfiltered pale	8.875– 9.25	8.875– 9.25	9.00 – 9.50
500 vis. No. 3 unfiltered pale	11.00 –11.25	11.00 –11.25	10.50 –11.00
200 vis. No. 5½ red oil	6.875– 7.25	6.75 – 7.25	7.00 – 7.50
300 vis. No. 5½ red oil	8.00 – 8.50	8.00 – 8.50	8.25 – 8.50
500 vis. No. 6 red oil	9.00 – 9.625	9.00 – 9.50	9.00 – 9.75

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	Jan. 16	Jan. 9	Jan. 3
Gasoline, U. S. Motor, 53-55 Gravity	6.00 – 7.00	6.00 – 6.50	6.00 – 6.50
Gasoline, U. S. Motor, blends and special cuts	7.00 – 8.00	7.00 – 8.00	7.00 – 8.00
Gas Oil, 30-34, per barrel	$1.05 –$1.10	$1.05 –$1.10	$1.05 –$1.10
Diesel Oil, 27 plus, per barrel	$0.95 –$1.05	$0.95 –$1.05	$0.95 –$1.05
Bunker oil, 14-18, per barrel	$0.80 –$1.00	$0.80 –$1.00	$0.80 –$1.00
Fuel oil, 14-18, per barrel	$0.70 –$1.00	$0.75 –$1.00	$0.75 –$1.00
Kerosene, 38-40 w.w., 125-150 flash, per gal.	4.50 – 4.75	4.50 – 5.00	4.50 – 5.00
Cased Goods			
Gasoline, U. S. Motor	$1.65 –$1.75	$1.65 –$1.75	$1.65 –$1.75
Kerosene, 38-40 w.w., 125-150 flash	$1.35 – 1.45	$1.30 –$1.45	$1.30 –$1.45

Crude Oil Prices, as Posted by Major

(Crude prices for years 1924-1925-1926-1927 in

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District)	$2.80
Bradford District Oil in National Transit Lines (Bradford District)	2.80
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	2.65
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	2.65
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	2.60
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	2.35
Keister Grade in National Transit Lines (Butler Co.)	1.10
Cabell Grade in Eureka Pipe Lines (West Virginia)	1.50
Corning Grade in Buckeye Pipe Lines (Ohio)	1.55
Corning, O. heavy grade	1.45
*Somerset Oil in Cumberland Pipe Lines (Kentucky)	1.60
Ragland Grade in Cumberland Pipe Lines (Kentucky)	.95

*Somerset oil run prior to Oct. 1922, takes price of 6 cents lower than above quotations.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines.....$1.50

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective March 14, 1927

Wooster	$1.57	Plymouth	$1.33
Lima	1.71	West. Kentucky	1.33
Waterloo	1.20	*Canadian Petro.	2.11
Indiana	1.48	*Oil Springs	2.18
Princeton	1.60	*Posted by Imperial Oil Ltd.	
Illinois	1.60		

OKLAHOMA, KANSAS And NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective March 12, 1927

28-28.9	$1.12	35-35.9	$1.26
29-29.9	1.14	36-36.9	1.28
30-30.9	1.16	37-37.9	1.30
31-31.9	1.18	38-38.9	1.32
32-32.9	1.20	39-39.9	1.34
33-33.9	1.22	40-40.9	1.36
34-34.9	1.24	41-41.9	1.38
42-42.9	$1.40	48-48.9	$1.52
43-43.9	1.42	49-49.9	1.54
44-44.9	1.44	50-50.9	1.56
45-45.9	1.46	51-51.9	1.58
46-46.9	1.48	52 and above	1.60
47-47.9	1.50		

Above schedule met on March 12, by Gulf, Mid-Continent Pet. Corp., and Empire; by Carter, Humble and The Texas Co. on March 14.

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

March 14, same schedule as Prairie in above fields, except these grades posted Nov. 16:

Below 25	$0.90	26-26.9	$1.08
25-25.9	1.06	27-27.9	1.10
Mirando, Tex.			$1.00

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

Effective Sept. 14, Magnolia posted same price schedule as Prairie in above fields and in Panola Co. except that Magnolia is paying $1.05 for all oil below 30 gravity.

Glasscock and Howard Counties	$0.60
Chalkfield (Howard Co.)	$0.80
Iatan district	$0.93
Corsicana heavy	$1.00

Carter Oil Co.

(Oklahoma and Kansas)

March 14, same schedule as Prairie.

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective Aug. 23

Hutchinson Carson and Wheeler Counties..$0.75
Pampa, Gray County, Effective March 14:

28-28.9	$ .80	37-37.9	$ .98
29-29.9	.82	38-38.9	1.00
30-30.9	.84	39-39.9	1.02
31-31.9	.86	40-40.9	1.04
32-32.9	.88	41-41.9	1.06
33-33.9	.90	42-42.9	1.08
34-34.9	.92	43-43.9	1.10
35-35.9	.94	44 and above	1.12
36-36.9	.96		

WEST TEXAS

Humble Oil & Refining Co.

Effective Aug. 23

Crane, Upton, Crockett and Pecos Counties...$0.60

NORTH LOUISIANA — ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton and De Soto

Effective March 14, 1927

Below 28	$1.10	40-40.9	$1.36
28-28.9	1.12	41-41.9	1.38
29-29.9	1.14	42-42.9	1.40
30-30.9	1.16	43-43.9	1.42
31-31.9	1.18	44-44.9	1.44
32-32.9	1.20	45-45.9	1.46
33-33.9	1.22	46-46.9	1.48
34-34.9	1.24	47-47.9	1.50
35-35.9	1.26	48-48.9	1.52
36-36.9	1.28	49-49.9	1.54
37-37.9	1.30	50-50.9	1.56
38-38.9	1.32	51-51.9	1.58
39-39.9	1.34	52 and above	1.60

*Smackover, below 24	$0.85
* do 24 and above	1.00
Bellevue	1.25
Cotton Valley	.85
**Urania, La.	.75
†East El Dorado	1.00

**Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

*Smackover prices posted on Nov. 21 by S. O La., Gulf, Shreveport-El Dorado Pipe Line, Atlantic Oil Producing Co. and Magnolia Pet Co.; on Nov 19 by La. Oil Refg. Corp.; on Nov. 23 by The Texas Co.

STEPHENS, ARKANSAS

Atlantic Oil Producing Co. and Louisiana Oil Refining Corp.

Below 28	$1.00	30-30.9	$1.06
28-28.9	1.02	31-31.9	1.08
29-29.9	1.04	32 and above	1.10

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective March 14

Grades A	$1.20	29-29.9	$1.25
Grades B:		30-30.9	1.27
Below 25	1.15	31-31.9	1.29
25-25.9	1.17	32-32.9	1.31
26-26.9	1.19	33-33.9	1.33
27-27.9	1.21	34-34.9	1.35
28-28.9	1.23	35 and above	1.37

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling and Pierce Junction. All other fields are Grades A only.

California Gas Oil Scarce; Fuel Oil Unchanged

Staff Special

LOS ANGELES, Jan. 14

GAS oil is scarce in the California market and it is doubtful if a cargo could be bought at almost any price. Recently a large refiner purchased several thousand barrels from other refiners, supposedly to run to cracking stills. Present quotations are $1.05 to $1.10 a barrel.

Although major refiners do not care to discuss the matter, it is known that they feel more kindly toward operating their cracking plants than they did one year ago. It is generally understood that cracked gasoline can be produced now at less cost than a year ago. It has been predicted that much more gasoline will be cracked in California in 1928 than in 1927.

U. S. Motor is fairly strong, and without change in quotations. Some of the major refiners are refusing to quote for export at less than 6.25 cents, but some goods can be bought at 6 cents. Tank car shippers are boosting their prices. One independent said this week that he was moving a few cars every week at 9 to 10 cents within the state, but it is doubted if as much as one-third of the gasoline is moving in tank cars within the state at this figure. Shipments to points outside of the state bring less, with 7 to 8.50 being the prevailing selling price. In fact, most of the out-of-state shipments move at prices ranging from 7 to close to 8 cents.

If fuel oil could be sold at a fair price and would move freely, the California refiner would be in an enviable position, but fuel oil stocks are increasing and low prices on the east coast are playing havoc with local refiners. If they wish to ship East coast they must compete with Gulf prices, which permits movement from Gulf points to New York at around $1.10 laid down in New York. Major California refiners as a rule are asking 80 cents, but with a tanker rate of 55 cents, this would make the laid down price at New York about $1.35 a barrel.

Tank car prices on fuel oil remain practically unchanged with several of the smaller plants being sold up for the present. Fuel in this trade is moving within a range of 60 to 75 cents, with most of the sales around 65 cents.

A spot purchase of natural gasoline was made last week at 8 cents, and quotations range from this figure up to 9 cents. This is a drop of at least a cent in the past three weeks. There is a heavy production of natural gasoline, and a few contracts are expiring, with renewals hard to sign.

Purchasers, in All Fields (in Effect January 16)

OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

(Effective March 14)

Grades A.....$1.20	*Grades B.....$1.15
‡Grades B (light crude):	
35-35.9.....$1.37	38-38.9.....$1.43
36-36.9..... 1.39	39-39.9..... 1.45
37-37.9..... 1.41	40 and above.... 1.47

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on oil below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co. and Midwest Refining Co.

(Salt Creek prices effective March 12)

‡Salt Creek 29-29.9	$1.14
" " 30-30.9	1.16
" " 31-31.9	1.18
" " 32-32.9	1.20
" " 33-33.9	1.22
" " 34-34.9	1.24
" " 35-35.9	1.26
" " 36-36.9	1.28
" " 37 and above	1.30
Elk Basin	1.33
Grass Creek light	1.33
Big Muddy	$1.25
Lance Creek	1.33
Rock Creek	1.25
Mule Creek	1.30
Rex Lake	1.10
‡Osage	1.33
‡Cat Creek, Mont.	1.33
Sunburst, Mont.	1.35
‡Hogback, N. Mex.	1.38
Artesia, N. Mex.	1.00

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

The Texas Co. buys Salt Creek and Big Muddy crude.

CALIFORNIA

Standard Oil Co. of California

Santa Maria and Ventura Posted by Union Oil Co.

Gravity	Signal Hill Seal Beach Huntington Beach	Inglewood Torrance	Whittier La Habra	Newhall, McKittrick, Kern River	Olinda-Brea Canon, Richfield	Athens-Rosecrans Dominguez	Montebello	Coyote Hills	Santa Fe Springs	Midway, Sunset Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria	Ventura
14-14.9	$ .85	$ .85	$ .85	$ .75	$ .85	....	$ .85	$ .85	....	$ .75	$ .75	$ .75	$ .75	$ .85	$ .85
15-15.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
16-16.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
17-17.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
18-18.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
19-19.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
20-20.9	.85	.85	.85	....	.85	....	.85	.85	....	.77	.77	.76	.76	.85	.85
21-21.9	.86	.86	.85	....	.86	....	.85	.86	.85	.79	.79	.77	.77	.85	.85
22-22.9	.87	.87	.85	....	.87	....	.85	.87	.85	.81	.81	.78	.78	.85	.85
23-23.9	.88	.88	....	....	.88	....	.85	.88	.85	.83	.83	.79	.79	.85	.85
24-24.9	.89	.89	....	....	.89	$ .89	.85	.89	.85	$ .85	.85	.80	.80	.85	.85
25-25.9	.90	.90	....	....	.90	.90	.86	.90	.86	.87	.87	.81	.81	.86	.86
26-26.9	.92	.92	....	....	.92	.92	.87	.91	.87	.89	.89	.83	.82	.87	.87
27-27.9	.94	.94	....	....	.94	.94	.88	.92	.88	.91	.91	.85	.83	.88	.88
28-28.9	.96	.96	....	....	.96	.96	.89	.93	.89	.93	.93	.87	....	.89	.89
29-29.9	.98	....	....	....	.98	.98	.90	.94	.91	.96	.96	.89	....	.91	.91
30-30.9	1.00	....	....	....	1.00	1.00	.91	.95	.93	.99	.99	.91	....	.93	.93
31-31.9	1.03	....	....	....	....	1.03	....	....	.95	1.02	1.02	.93	....	....	.95
32-32.9	1.06	....	....	....	....	1.06	....	....	.97	1.05	1.05	.95	....	....	.97
33-33.9	....	....	....	....	....	1.09	....	....	.99	1.08	1.08	.97	....	....	.99
34-34.9	....	....	....	....	....	1.12	....	....	1.01	....	1.11	.99	....	....	1.01
35-35.9	....	....	....	....	....	1.15	....	....	1.03	....	....	1.01	....	....	1.03
36-36.9	....	....	....	....	....	1.18	....	....	1.06	....	....	....	....	....	1.06
37-37.9	....	....	....	....	....	1.21	....	....	1.09	....	....	....	....	....	1.09
38-38.9	....	....	....	....	....	1.24	....	....	1.12	....	....	....	....	....	1.12
39-39.9	....	....	....	....	....	1.27	....	....	1.15	....	....	....	....	....	1.15
40-40.9	....	....	....	....	....	1.30	....	....	....	....	....	....	....	....	....
41-41.9	....	....	....	....	....	1.33	....	....	....	....	....	....	....	....	....
42-42.9	....	....	....	....	....	1.36	....	....	....	....	....	....	....	....	....

*Union Oil Co. also purchases Long Beach Crude and is maintaining the same gravity and price schedule in that field as the Standard maintains in Signal Hill and Huntington Beach fields. The Union also buys and pays the same prices as the Standard in the Rosecrans-Dominguez fields, on gravities ranging from 14 degrees to and including 24.9 degrees and in Santa Fe Springs, on gravities ranging from 20 to and including 23.9 degrees.

The gasoline content of the gas at Long Beach from the deeper wells ranges from two to three gallons to the 1,000 cubic feet. For this reason, there will be much natural gasoline available at Long Beach in the next three months.

* * *

Los Angeles Shipments

LOS ANGELES, Jan. 13.—From January 1 to 7 inclusive, 17 tankers left Los Angeles harbor, carrying to points outside of Pacific coast trade territory, a total of 903,794 barrels, or a daily average of 129,113 barrels, of crude and other petroleum products. This is close to a 300,000 barrel drop under the previous week, which had a total and daily average of 1,199,674 barrels and 171,382 barrels, respectively.

Of the 17 cargoes leaving the harbor, 12 carried 595,961 barrels of fuel, which is over half the total movement. The entire movement includes 59,679 barrels of crude, 595,961 barrels of fuel, 135,124 barrels of kerosene, 4,997 barrels of lube oil, 30,926 barrels of diesel and 77,107 barrels of gasoline. Pacific foreign points drew 59,679 barrels of crude, 209,364 barrels of fuel, 135,124 barrels of kerosene, 4,997 barrels of lube oil and all the diesel—30,926 barrels. Products going to Atlantic domestic were 77,107 barrels of gasoline and 79,700 barrels of fuel. Atlantic foreign had fuel shipments only, which amounted to 306,897 barrels.

Los Angeles December Shipments

LOS ANGELES, Jan. 14.—During the month of December a total of 5,579,288 barrels of petroleum products, or a daily average of 179,977 barrels, left Los Angeles harbor in tankers for points outside of Pacific coast trade territory. This compares with 5,394,855 barrels or a daily average of 179,828 barrels during the month of November.

Pacific foreign points drew 264,286 barrels of crude, 1,504,790 barrels of fuel, 371,512 barrels of gasoline, 242,103 barrels of kerosene and 132,611 barrels of diesel. Shipments to Atlantic domestic included 820,350 barrels of crude, 238,545 barrels of distillate, 78,506 barrels of fuel, 685,746 barrels of gasoline, 149,980 barrels of diesel and 71,340 barrels of tops. Atlantic foreign points drew 771,085 barrels of fuel, 297,043 barrels of gasoline and 25,427 barrels of diesel.

Crude Price Changes

DALLAS.—On Jan. 14 Magnolia Petroleum Co. reduced price of Glasscock county crude 20 cents, making new price 60 cents. It also reduced crude in Howard county to a flat price of 60 cents for all grades, except in Chalk field where prices are 80 cents for all grades.

All grades of crude in Iatan district, which includes Iatan, Howard county and Westbrook fields, which had been on a gravity schedule with prices ranging from $1.05 to $1.60, were reduced to a flat price of 93 cents, which amounts to a cut of 12 to 67 cents in this district.

All other crudes in Texas were unchanged.

Transactions in Oil Shares on New York Stock Exchange

1926 High	1926 Low	1927 High	1927 Low		Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Jan. 14 Sales	First	High	Low	Last	Change
32⅛	24¼	37⅝	27⅝	(sh)	916,675	N.P.	Amerada Corp.	50cQ	Oct. 30, 27	12,300	31⅞	32½	31	32¼	+ 1¼
74	39⅞	79⅞	35⅛	(sh)	209,180	N.P.	American Republics	.....	.....	46,300	70	72	63½	68	— 4½
59⅛	44⅝	50¼	38⅝	$	56,000,000	$25	Associated Oil	50cQ	Dec. 24, 27	110	39¼	40	39	40	— 1
128⅝	97	131⅝	105¼		50,000,000	100	Atlantic Refining	$1Q	Dec. 15, 27	14,800	106⅜	109½	105¼	107	— ½
120	115½	118½	111½		20,000,000	100	do pfd	$1.75Q	Nov. 1, 27	110	118	118	118	118	+ ½
33⅛	23½	35½	20⅝		25,000,000	25	Barnsdall Corp. A	s62½cQ	Nov. 15, 27	26,400	25	26½	24⅜	26	+ ¾
29½	22½	32½	20½		3,842,400	25	do B	s62½cQ	Nov. 15, 27	200	25⅜	25⅜	25⅜	25⅜	+ 1
68⅛	29¾	32⅛	20		51,523,950	25	California Petroleum	25cQ	Dec. 1, 27	32,400	26¾	26⅞	25¾	25¾	— ⅞
94⅛	50	96¾	65		24,355,000	100	General Asphalt	.....	.....	139,700	92¼	93¼	86⅝	89¼	— 7⅜
140½	94⅞	144⅞	107¼		6,874,200	100	do pfd	$1.25Q	Dec. 1, 27	2,500	140	140⅛	132¼	138	— 2¼
72	50¼	175⅝	60½		25,000,000	100	Houston Oil	.....	.....	31,600	151½	152½	145	151	— ½
84	19⅝	32½	17⅝	(sh)	500,000	N.P.	Independent Oil & Gas	25cQ	Oct. 31, 27	34,200	26½	28¼	26⅛	26⅜	+ ½
13⅜	7¼	12⅛	7⅛	$	3,280,340	$10	Indian Refining	.....	Dec. 15, 20	43,800	11	12⅝	10¼	11½	— ⅜
12½	8	12	7¼		4,550,110	10	do ctfs	.....	.....	46,300	9⅝	10⅜	9½	9⅞	+ ⅜
104	90	112	99		2,296,400	100	do pfd	.....	Dec. 15, 21	800	103½	107	103½	107	+ 4½
24⅛	19¼	36⅞	20⅛	(sh)	3,992,067	N.P.	Lago Oil & Transport	75cQ	Nov. 1, 27	11,200	34⅜	35⅞	33⅛	35	+ 1
19⅛	12	18⅛	10	(sh)	1,131,290	N.P.	Louisiana Oil Refining	.....	.....	16,400	12⅝	12¾	12	12¼	— ¼
98	93	97	85¼	$	4,000,000	$100	do pfd	$1½Q	Nov. 15, 27	20	89½	89½	89½	89½	— 1½
28⅞	16½	22¾	12	(sh)	330,000	N.P.	Maracaibo Oil	.....	.....	11,400	16⅜	18⅛	15⅜	17¼	+ 1¼
63⅜	49¼	58½	31	(sh)	2,316,401	N.P.	Marland Oil Co.	.....	Mar. 31, 27	57,800	36	37½	35⅛	37⅛	+ 1⅛
250	225	320	200	$	45,942,800	$100	Mexican Petroleum	$3Q	Jan. 20, 28	30	325	325	325	325	0
...	...	...	...		12,000,000	100	do pfd	$2Q	Jan. 20, 28	...	...	...	...	...	...
13¾	6	9¼	3	(sh)	945,839	N.P.	Mexican Seaboard	.....	Nov. 15, 24	6,500	5¼	5⅛	5	5	— ¼
37	27½	39⅝	25½	(sh)	1,357,800	N.P.	Mid-Continent Petroleum	.....	Aug. 1, 27	13,800	28⅝	29¼	28	29⅛	+ ½
104¼	90	105	97	$	6,718,000	$100	do pfd	$1.75Q	Dec. 1, 27	...	...	...	...	...	...
2½	⅝	3¾	1⅝		24,435,000	10	Middle States	.....	July 1, 23	34,500	3⅛	3⅛	2¾	3⅛	+ ⅛
1⅝	½	2¾	1⅜		5,356,660	...	do ctfs	.....	.....	2,600	2¼	2¼	1¾	2⅛	+ ⅛
2¼	1	1⅞	1	(sh)	3,500,000	N.P.	Pacific Oil	.....	.....	100	1¼	1¼	1¼	1¼	0
76½	56⅛	65⅞	40⅛	$	48,807,500	$ 50	Pan American P. & T.	.....	Oct. 20, 27	2,500	45	45¼	43¼	44⅛	— 1
78⅝	56⅞	66⅜	40⅞		121,094,850	50	do B	.....	Oct. 20, 27	70,600	44⅝	45½	42⅞	44⅜	— ⅝
46	30	37⅛	16¾	(sh)	400,000	N.P.	Pan American Western B.	.....	Jan. 30, 27	4,900	20⅞	21	20⅛	20½	+ ¼
62	4½	18⅞	8	(sh)	198,770	N.P.	Panhandle P. & R.	.....	.....	6,100	15	16½	14⅝	16¼	+ ¼
99⅛	51	83¾	58¼	$	2,935,200	$100	do pfd	.....	July 2, 23	100	80½	80½	79½	79½	0
57⅛	40	60¼	36½	(sh)	2,406,796	N.P.	Phillips Petroleum	75cQ	Jan. 3, 28	96,200	41⅞	43½	40¾	43	+ 1½
1⅞	½	1⅜	½	$	29,622,925	$ 25	Pierce Oil Corp.	.....	.....	4,400	¾	¾	⅝	¾	+ ⅛
27⅜	11⅛	24	13½		15,000,000	100	do pfd	.....	Feb. 1, 22	500	19½	20½	16½	20½	+ 1½
7	2¼	5⅛	2½	(sh)	2,500,000	N.P.	Pierce Petroleum	.....	.....	10,700	4½	4⅝	4	4⅜	— ⅛
20⅛	11	33⅞	16½	1	37,450,850	$50	Producers & Refiners	.....	Sept. 15, 23	19,900	25	26	24¾	25⅜	+ ¼
41¾	30¾	50	36¾		2,845,350	50	do pfd	.....	May 1, 25	270	42¼	43	41⅝	42½	0
31	25¼	33½	25		75,939,250	25	Pure Oil Co.	37½cQ	Dec. 1, 27	44,000	27⅛	27⅛	26⅛	26¼	— ¾
112¾	106	115½	111⅝		13,000,000	100	do 8% pfd	$2Q	Jan. 2, 28	...	...	...	...	...	...
57⅛	47⅜	58	45	(sh)	616,605	13.40	Royal Dutch, N. Y. shares	$1.80	Aug. 2, 27	2,500	47⅞	48¾	47½	48¾	+ ¾
40⅝	40½	47⅞	41⅜	(sh)	78,389	F2	Shell Transport & T.	$1.45	July 22, 27	100	42⅞	42⅞	42⅞	42⅞	— ¼
31	24	31¾	24⅝	(sh)	10,000,000	N.P.	Shell Union Oil	35cQ	Dec. 31, 27	18,000	25⅞	26¾	25⅞	26¾	+ ⅝
114	103	111	107½	$	18,350,400	$100	do pfd	$1½Q	Nov. 15, 27	...	...	...	...	...	...
28⅝	15⅛	25¼	14¼		7,208,080	10	Simms Petroleum	.....	Apr. 1, 27	20,900	24¼	24⅜	23⅛	23⅜	— ½
24⅞	16¾	22⅝	15	(sh)	4,501,339	N.P.	Sinclair Consolidated	.....	May 31, 24	68,100	20⅞	21¼	19⅞	20⅞	+ ⅜
99½	90	104½	97	$	16,907,000	$100	do pfd	$2Q	Nov. 15, 27	900	104	106	103½	106	+ 3
37⅛	26¾	37⅜	24⅛		27,396,590	25	Skelly Oil Co.	50cQ	Dec. 15, 27	37,800	17	17	13¼	15⅜	+ 1⅞
63⅜	52⅝	60¾	50⅜	(sh)	13,016,434	N.P.	S. O. California	62½cQ	Dec. 15, 27	16,600	55⅞	56⅝	55	56⅛	+ ⅝
46⅝	37⅛	43¾	35⅛	$	606,243,050	$25	S. O. New Jersey	‡25cQ	Dec. 15, 27	52,800	40⅛	40½	39⅞	40⅛	+ ⅛
33⅛	32½	34⅛	29¾		424,348,275	25	S. O. New York	40cQ	Dec. 15, 27	59,100	31¼	31⅜	30⅜	31	0
41⅝	30⅜	34⅞	30	(sh)	1,171,508	N.P.	Sun Oil	‡25cQ	Dec. 15, 27	1,400	32	32	31½	32	+ ⅜
...	...	101⅝	99	$	5,000,000	$100	do pfd	$1.50Q	Dec. 1, 27	200	100	100	100	100	0
5¼	1	6½	3⅛	(sh)	1,121,368	N.P.	Superior Oil Corp	.....	Dec. 20, 20	6,300	3½	3¾	3⅜	3½	+ ½
57⅞	53⅛	58	45	$	180,428,225	25	The Texas Corp.	75cQ	Jan. 1, 28	64,000	54¼	55⅜	54	54½	+ ¼
19½	12	18⅞	12		8,380,340	10	Texas Pacific Coal & Oil	15cQ	Jan. 3, 28	67,400	14⅜	17	14¼	16¼	+ 1½
39¾	37	29⅛	19	(sh)	2,168,264	N.P.	Tide Water Oil Co.	20cQ	Dec. 31, 27	500	21⅞	22¼	21⅞	22¼	+ ⅛
103	87¼	90⅛	85	$	20,705,200	$100	do 5½ pfd	$1.25Q	Nov. 15, 27	900	89	89	89	89	+ ¼
....	....	19½	15⅝	(sh)	4,795,934	N.P.	Tide Water Associated	.....	Aug. 1, 27	22,100	16¾	17	16⅜	16½	— ½
....	....	90⅜	85	$	72,795,900	100	do pfd	$1.50Q	Jan. 3, 28	500	87	87	86½	86⅝	— ⅛
5¼	3	10¼	3¾	(sh)	3,742,029	N.P.	Transcontinental Oil	.....	.....	325,000	8⅞	10⅛	8⅝	9¼	+ ½
58¾	37¼	56½	39¾	$	40,759,475	$25	Union Oil of California	50cQ	Nov. 10,27	13,200	44⅞	45¼	43½	44½	0
120⅜	84¾	123½	94		30,734,000	100	Union Tank Car Co.	$1.25Q	Dec. 1, 27	300	123	123	121	121	— 3
....	....	34½	24½	(sh)	240,000	N.P.	Warner Quinlan	50cQ	Jan. 3, 28	6,900	32⅝	32	30⅝	30⅞	— 1½
29¾	25⅛	27½	20	(sh)	490,000	N.P.	White Eagle Oil & Refining	25cQ	Jan. 20, 28	7,900	23	24¼	22	22	— ⅞

•New High †New Low xEx-Dividend ‡Also extras s-Stock Total Sales 1,639,440

PITTSBURGH STOCK EXCHANGE

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended January 13. Sales	First	High	Low	Last	Change
9⅞	6⅞	9½	8⅞	$ 10	Arkansas Nat. Gas	5,270	9⅜	9½	8⅞	9	— ½
98⅝	80⅞	92	92	100	Columbia Gas	30	92	92	92	92	+ 1⅞
107⅞	100	...	...	100	do pfd	...	...	...	...	...	...
15	7½	8⅛	8	10	Devonian Oil	222	8	8	8	8	0
117½	115	115⅛	115	100	Duquesne Light pfd.	111	115	115⅛	115	115	— ⅛
12¼	6	13	12⅝	N.P.	Houston Gulf Gas	75	13	13	13	13	+ ½
59¼	37¼	54	53	$ 25	Lone Star Gas	4,870	53¾	54	53¾	54	+ ⅝
3⅞	3	3½	3¼	5	Pittsburgh Oil & Gas	180	3½	3½	3½	3½	+ ¼
8	5½	7¼	7	10	Salt Creek Cons.	380	7	7¼	7	7¼	+ ⅝
26½	17	...	...	10	Tidal Osage	...	...	...	...	...	...
43	33	33¼	33	N.P.	Waverly Oil Wks. A	100	33¼	33	33	33	— ½

PITTSBURGH CURB EXCHANGE

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended January 13. Sales	First	High	Low	Last	Change
....	....	....	....	$ 5	Duquesne Oil	.....	....	....	....	....	.....
95	88	....	....	25	Gulf Oil	.....	....	....	....	....	.....
10⅜	5⅛	....	....	25	Leonard Oil & Dev.	.....	....	....	....	....	.....
2.70	.30	1.00	.50	10	Omar Oil & Gas	2,500	.90	.90	.75	.75	— .25
2¼	1¾	21¼	20	5	Pittsburgh Oil Dev.	2,450	20	21¼	20	21	+ ⅛
31	19	21	20	5	Plymouth Oil	.....	....	....	....	....	.....
6	5	....	....	5	States Oil	.....	....	....	....	....	.....
3⅜	1½	3 1/16	3	1	Texon Oil & Land	3,900	3	3⅛	3	3 1/16	+ 1/16
23⅜	18	....	....	10	Tidal Osage Non-vtg.	.....	....	....	....	....	.....

*New High †New Low xEx-Dividend.

Cleveland Stock Market

January 13

	Par Value	Bid	Asked	Last Sale
Canfield Oil Co.	100	...	...	...
do pfd	100	100	...	100
Fred G. Clark	10	2¼	3½	2⅛
National Refining Co.	25	35½	36	36
do pfd	100	130	...	130½
Paragon Refining Co.	25	10¾	11	11
do pfd	100	105	110	107½

x Ex-Dividend.

Oil Dividends

	Amount	Payable	Stock of Record
Atlantic Refg. pfd q.	$1.75	Feb. 1	Jan. 16
Barnsdall A & B q. stock	2½%	Feb. 6	Jan. 16
Eureka P. L. q.	$1	Feb. 1	Jan. 16
Royal Dutch	$1.343	Jan. 28	Jan. 16
Shell T & T	97c	Jan. 23	Jan. 16
Salt Creek Prod. q.	75c	Feb. 1	Jan. 14
Sinclair Cons. pfd. q.	$2	Feb. 15	Feb. 1
Skelly Oil q.	50c	Mar. 15	Feb. 15
Tide Water pfd. q.	$1.25	Feb. 15	Jan. 16
Union Oil q.	50c	Feb. 10	Jan. 19
Venezuelan Pet. init.	5c	Feb. 15	Jan. 31
Wilcox O & G q.	50c	Feb. 10	Jan. 15

Standard Oil Stock Traded in New York

1926 High	1926 Low	1927 High	1927 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Jan. 14 Sales	First	High	Low	Last	Change
21	16¾	21⅝	17⅝	£ 4,000,000	£1	Anglo-American Oil	60 11c	May 31, 27	12,800	18½	21⅜	18½	21¼	+ 2¾
20¼	16½	20½	17⅜	.....	£1	do ctfs. non-voting	.....	.....	700	18	20⅛	18	20⅛	+ 1⅜
2¼	.75	3⅜	.75	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	500	1½	1¾	1½	1⅜	+ ⅛
5	2⅛	6½	2½	$ 000,000	$ 10	do pfd	.....	.....	100	3½	3½	3½	3½	0
75	65	69	50	1,000,000	25	Borne Scrymser	‡$1S.A.	Oct. 15, 27	200	56	56	56	56	— 3
59½	42	60	45	10,000,000	50	Buckeye Pipe Line	$1Q	Dec. 15, 27	700	58¾	59	58¼	58¾	0
82½	65	126	76½	3,000,000	25	Chesebrough Mfg	$1Q	Dec. 28, 27	1,100	121	135	121	135½	+12½
25⅝	17⅛	22⅝	16¼	38,805,260	10	Continental Oil	25cQ	Dec. 15, 27	5,000	22¼	22½	21¼	22⅛	— ⅛
137	102	137	89	3,000,000	100	Cumberland Pipe Line	$2Q	Dec. 15, 27	.....	.....	.....	.....	.....	.....
63¾	43	68½	47	5,000,000	100	Eureka Pipe Line	$1Q	Nov. 1, 27	500	64¾	67	64¾	67	+ 2¼
32½	9½	13½	3¾	16,000,000	100	Galena Signal Oil	.....	June 30, 25	300	6½	6½	6	6	— ½
94½	35	59¾	23	4,000,000	100	do new pfd	.....	June 30, 26	610	31½	33	31½	33	+ 6
97½	40	60⅜	36	2,000,000	100	do old pfd	.....	June 30, 26	70	41½	41½	41	41½	+ 6½
99⅝	52	68½	54	73,117,577	25	Humble Oil & Refining	‡30cQ	Jan. 1, 28	40,100	67	68	66¼	67¾	+ ⅞
144½	125¼	182	123¾	20,000,000	100	Illinois Pipe Line	$6S.A.	Dec. 15, 27	2,250	177	183½	177	182	+ 2
39¾	32½	64¾	37¾	(sh) 6,491,952	N.P.	Imperial of Canada	‡25cQ	Dec. 1, 27	4,400	59⅛	65¼	59	64⅛	+ 4⅝
70	54½	94½	61	$ 5,000,000	$50	Indiana Pipe Line	‡$1Q	Nov. 15, 27	600	77	78¾	76	78¾	+ 1¾
35¼	28⅝	39	28	(sh) 7,118,138	N.P.	International Petroleum	25c	Nov. 15, 27	134,900	36¾	42¾	37	42⅜	+ 1⅜
20⅜	12½	24	13½	$ 6,362,500	$12½	National Transit Co	25cQ	Dec. 15, 27	3,300	21⅜	22	21	21½	— ½
51½	27½	44½	31¼	5,000,000	100	New York Transit	.....	July 15, 26	400	40	40⅛	39	39	— 1
80½	64	100	70	4,000,000	100	Northern Pipe Line	‡$3S.A.	Jan. 1, 28	150	96¾	97	95	95	— 2
67⅜	55¾	67⅛	52	60,000,000	25	Ohio Oil Co	‡50cQ	Dec. 15, 27	6,000	65⅝	66¾	65⅝	66¾	— 1¾
24⅜	15	39	12	10,000,000	25	Penn Mex. Fuel	.....	May 21, 25	9,000	37	39⅞	36½	39¼	+ 1¾
60¼	48	55½	45¾	60,000,000	25	Prairie Oil & Gas	.....	Aug. 31, 27	3,000	49¼	50¼	48¾	50½	+ 1
137½	122¼	190	132	81,000,000	100	Prairie Pipe Line	$2.50Q	Oct. 31, 27	1,350	185	187	184	187	+ 2
220	184½	201½	175½	4,000,000	100	Solar Refining	$5S.A.	Dec. 20, 27	90	178	178	176	176	— 2
27	21	27¼	15½	5,000,000	50	Southern Pipe Line	$2	Dec. 1, 27	700	21½	22	21½	22	+ 1
50	34½	41¼	34½	20,000,000	25	South Penn Oil	50cQ	Dec. 31, 27	1,900	37¼	38½	36¾	38½	+ 1¼
57	49	111½	111¾	3,500,000	100	South West Pa. Pipe Lines	‡$1Q	Dec. 31, 27	450	78	79½	72	79	+ 8
70⅜	60½	81½	64¾	228,415,463	25	S. O. Indiana	‡62½cQ	Dec. 15, 27	31,100	79⅝	80½	78⅞	80¼	+ ½
36½	16½	20⅞	14⅝	8,000,000	25	S. O. Kansas	.....	June 16, 24	800	16	16⅜	15½	16	0
134¾	108	130	111½	17,012,599	25	S. O. Kentucky	$1Q	Dec. 31, 27	11,800	131⅝	133	127	130	— 2
51⅜	42	49½	40	4,559,850	25	S. O. Nebraska	62cQ	Dec. 20, 27	100	42¾	42¾	42¾	42¾	+ ½
672	288	86¾	73	14,000,000	25	S. O. Ohio	62½cQ	Jan. 2, 28	450	77¼	78½	79¼	78¼	+ ¼
120½	116½	122	117¼	7,000,000	100	do pfd	$1.75Q	Dec. 1, 27	.....	.....	.....	.....	.....	.....
23	15½	21	14½	861,466	25	Swan Finch Co	.....	Nov. 1, 19	.....	.....	.....	.....	.....	.....
109¾	90¼	149⅞	95⅛	62,470,800	25	Vacuum Oil	‡50cQ	Dec. 20, 27	30,200	140¼	148⅝	140¼	148	+ 9

*New high †New low xEx dividend ‡Also extras.

New York Curb Market

1926 High	1926 Low	1927 High	1927 Low	Par Value	Stocks	Transactions Week Ended Jan. 14 Sales	First	High	Low	Last	Change
6¾	45	2½	.55	$5	Amer. Con. Oilfields	157,000	1	1⅛	.82	.82	— .18
14½	4	7½	2¾	N.P.	Amer. Maracaibo	23,000	4	4⅞	4	4⅜	0
8⅜	5¾	9¾	6¾	$10	Arkansas Nat. Gas	2,200	9⅝	9⅞	9	9	— ⅝
20½	14⅛	20½	15½	N.P.	Beacon Oil	.....	.....	.....	.....	.....	.....
85⅛	60	49	20½	N.P.	British American	600	39	39¾	38¾	39¾	+ ¼
28⅝	9¼	28¼	14⅝	25c	Carib Syndicate(new)	9,200	18⅞	23	18¾	22	+ 3¼
...	...	26	16½	...	do ctfs. of deposit	.....	.....	.....	.....	.....	.....
51	37½	58¾	40¼	$20	Cities Service	25,500	55⅜	55¾	54⅜	54⅝	— 1⅛
92½	82⅜	95⅜	87	100	do pfd	1,300	95	95⅛	94¾	95⅛	0
8¾	7¼	8½	7⅜	10	do pfd. B	100	8⅞	8⅞	8⅞	8⅞	0
25¼	19	29¼	22½	10	do banker's shares	.....	.....	.....	.....	.....	.....
3½	1¾	3⅛	1⅛	$1	Colombia Syndicate	1,900	1⅞	1⅛	1¾	1⅞	0
10¼	8⅛	9½	6⅝	10	Consolidated Royal	.....	.....	.....	.....	.....	.....
16	10	14⅞	9½	N.P.	Creole Syndicate	78,000	11⅞	12¾	11¾	12⅛	0
7⅜	1⅜	3	.50	N.P.	Crown Central	2,400	1	1⅛	.95	1	+ ⅛
8½	½	12	4	...	Darby Petroleum	1,300	8¼	9	8⅛	9	+ 1¼
....	....	11¼	5	...	do trust ctfs	.....	.....	.....	.....	.....	.....
4	1¾	2½	75	N.P.	Derby Oil & Refining	.....	.....	.....	.....	.....	.....
19	13	16¾	6½	N.P.	do pfd	.....	.....	.....	.....	.....	.....
7½	2½	3¾	1	N.P.	Gibson Oil	4,300	1⅞	2	1¾	1¾	— ⅛
2	.63	1⅝	.40	N.P.	Gilliland ctfs	200	51	53	51	51	— 4
98	82	117½	86¼	$25	Gulf Oil Corp	13,000	115	115	112½	114	— 1
3⅜	1	2¼	1⅛	N.P.	Kirby Petroleum	800	1½	1⅞	1⅜	1⅜	+ ⅛
12¼	5¾	10⅞	5⅜	N.P.	Leonard Oil & Dev	2,700	6⅛	6¼	5⅞	6	— ⅛
27	20	27½	20	N.P.	Lion Oil & Refg	800	22½	23	22	22¾	+ 2¾
46	31	59⅜	37	$25	Lone Star Gas	2,700	54	54½	52¾	53¾	— ¼
2¾	2	2¾	.87	1	Magdalena Synd	16,700	1⅝	1⅝	1¼	1⅜	— ¼
5½	1⅜	3	1⅜	10	Mexican-Panuco	.....	.....	.....	.....	.....	.....
1¾	1¾	1⅜	1	1	Mountain & Gulf	.....	.....	.....	.....	.....	.....
26	23	29¼	22¾	10	Mountain Producers	11,900	28¼	28⅞	27¾	28	— ¾
6¾	5	5⅞	4⅝	5	New Bradford	1,600	5⅜	5½	5⅜	6⅜	0
11¾	2	6¼	4	10	New England Fuel	.....	.....	.....	.....	.....	.....
17	9½	16	9¼	1	New Mex. & Ariz	3,900	10	10	9¼	9⅜	— ⅜
17	8	13⅞	9	25	New York Oil	3,800	13	14¼	12¾	13¼	— 1¾
12⅛	8¾	12⅜	10	N.P.	North Cent. Texas	300	11	11¼	11	11¼	+ ¼
44¾	33	....	....	$25	Ohio Fuel Corp	.....	.....	.....	.....	.....	.....
33	28½	27½	21¼	...	Okla. Nat. Gas ctfs.	.....	.....	.....	.....	.....	.....
10½	5⅛	9⅝	1¾	N.P.	Pandem	17,600	4⅞	5⅜	4⅝	5⅜	+ ⅜
12½	11¾	12⅜	7	N.P.	Pantapec Oil	.....	.....	.....	.....	.....	.....
2⅝	.20	.37	.25	N.P.	Peer Oil Corp	.....	.....	.....	.....	.....	.....
22¾	12	13½	5⅛	$10	Pennok Oil	300	6	6	6	6	+ ⅜
38	14½	24⅜	7	25	Red Bank Oil	.....	.....	.....	.....	.....	.....
30¼	12	15½	2	N.P.	Reiter-Foster	1,600	5⅜	5½	5	5¼	— ⅜
27½	22	29⅜	15	$25	Richfield Oil	.....	.....	.....	.....	.....	.....
7½	4½	7	4½	N.P.	Ryan Consolidated	100	5¼	5¼	5¼	5¼	+ ¼
10	7½	8	6	$10	Salt Creek Cons	3,700	7⅛	7¼	7	7¼	+ ⅛
36	26⅞	35½	27¼	10	Salt Creek Prod	15,400	34⅞	35	33¾	34	— ⅝
4⅜	1⅜	7	1¼	5	Savoy Oil	.....	.....	.....	.....	.....	.....
27	7⅜	26½	17	10	Tidal Osage	160	19⅞	19⅞	19¼	19¼	— ⅝
25¾	7⅜	23¾	15	10	do non-voting	400	18	18	17¾	17¾	— ½
...	...	92	63½	100	Transcontinental pfd.	200	86	86	86	86	+ 1
3	4⅛	7⅛	4¼	5	Venezuelan Petrol	9,300	5¾	6¼	5½	5¾	0
31½	22	32⅝	20⅜	N.P.	Wilcox Oil & Gas	800	22	22⅞	22	22⅞	+ 1⅜
9½	4⅜	8	4¾	$1	Woodley Petroleum	906	6½	7	6½	7	+ ⅜

*New High †New Low xEx Dividend

Eureka Pipe Line Co.—Annual meeting will be held Jan. 26 at Oil City, Pa.

Standard Oil Co. of Nebraska—All directors and officers re-elected.

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as assistant to Lubricating Sales Manager. Thoroughly familiar with manufacturing and compounding of lubricating oils and greases. Give full details and salary expected.

Address Box 4

Business Opportunities

WHERE JOBBER AND REFINER MEET

My office is nothing more than a clearing house for Seller and Buyer of Petroleum Products

DALE W. MOORE

532-533 Mayo Bldg., Tulsa, Okla.
Telephones: 3-4177 and 3-4178.
L. D. 186

Miscellaneous

WHAT IT COSTS

"For Sale," "Wanted to Buy," "Help Wanted," "Business Opportunities," "Miscellaneous" classifications, set in type this size without border—10 cents a word. Minimum charge, $3.00.

"Positions Wanted"—5 cents a word. Minimum charge $1.00.

Advertisements set in special type or with border—$4.00 per column inch.

Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

For Sale

GOOD GASOLINE BUSINESS FOR SALE
North Carolina town. Good contract. Also own Service Stations. Will sell either wholesale or both for cash only. No gasoline price wars here.

Address Box 6

IDLE AND PORTABLE SOUTHWESTERN EQUIPMENT. Fractionators, absorbers, stills condensers, exchangers and complete plants Priced to move. W. F. Pyne, 909 So. Ard more Ave., Los Angeles, California.

BULK STORAGE

Complete compounding plant, large warehouse, eight tanks, trucks, pumps, miscellaneous equipment. Established seven years with excellent reputation. Bargain at $30,000. For full details write

E. H. Jayne Oil Company,
Webster, N. Y.

WHOLESALE AND RETAIL JOBBING BUSINESS FOR SALE

Due to other interests we will sell established wholesale and retail jobbing business located in Detroit. 1927 gallonage 2,200,000. The price is very low for quick sale and will accept $15,000 as down payment. For full particulars address

N. Hittinger, 392 Continental Ave.
Detroit

BULK STORAGE AND VERY ACTIVE GOING WHOLESALE GASOLINE AND OIL BUSINESS FOR SALE

with excellent retail outlets in one of the most staple and desirable large cities of the East.

Storage capacity 250,000 gallons operated entirely by gravity. Present volume of sales of gasoline, lubricating oils and fuel oils, more than a million and a half gallons annually, with business steadily increasing. This is one of the best and most completely equipped plants in the East.

It will require about $75,000 in cash to take over plant, property and business. A thorough and complete investigation will be offered to party who can demonstrate they are in a position to make a deal.

Address inquiries, in confidence, to BOX 7.

Petroleum Film Ready For Distribution

NEW YORK, Jan. 14.—The seven-reel film "The Story of Petroleum," exhibited at the American Petroleum Institute meeting in Chicago, will be ready for distribution by Jan. 15 by the Bureau of Mines from the bureau's Pittsburgh station. There are seven sets of this film for standard gauge projection machines.

Sets will be lent free of charge providing the borrower has a good projection machine and a competent operator and pays all telegrams and transportation charges. Films must be reshipped promptly by borrowers on date specified. Films returned to Pittsburgh do not have to be rewound or repaired, but those forwarded to other destinations must be in shape for the next borrower.

The films may be purchased through the American Petroleum Institute from the manufacturer, the Rothacker Industrial Films, Inc., Chicago, for $500 for a set of standard width and perforation, or $260 for a set for smaller projectors. The standard width film is of slow burning stock and the narrow-gauge is non-inflammable.

New York Curb Bonds

Week Ending Jan. 13

	High	Low	Last	Ch'ge
Beacon Oil 6s '36	103	102¼	102⅛	— ⅛
Cities Serv. 5s '66	91¼	91	91	— ¼
Cities Serv. 6s '66	103¾	103	103¾	+ ⅝
Cities Serv. G 5½s '42	95⅜	95	95¼	+ ⅛
Cont. Oil 5¼s '37	99	98⅝	99	0
Empire Oil 5½s '42	93	92⅝	93	+ ⅛
Galena Oil 5½s '42	89⅞	87½	89⅞	+2⅜
Gulf Oil 5s '37	101¾	101¼	101¾	+ ¼
Independent Oil 6s '39	99¼	97⅝	99	+1¼
Phillips Pet. 5¼s '39	95	94¾	94⅞	0
Richfield Oil 6s '41	99¼	98½	99	0
S. O. of N. Y. 6½s '33	104	103⅝	103¾	— ⅛
Sun Oil 5½s '39	101½	101½	101½	— ½
Trans. Con't Oil 7s '30	116	112½	114⅝	—1⅞
Warner-Quin. 6s '42	100½	99¾	100⅛	— ⅝

New York Bonds

Week Ending Jan. 13

	High	Low	Last	Ch'ge
Amer. Rep. deb. 6s	102½	102½	102½	+ ⅛
Atlantic Refg. deb. 5s	103⅜	103¼	103¼	0
Barnsdall Corp. 6s	102½	102¼	102⅜	+ ⅞
Barnsdall Corp. 6s ex-war.	92	91½	91½	+ ¼
Cal. Pet. 5s	99⅝	98⅛	98⅛	— ⅛
Cal. Pet. 5½s	102¾	101⅜	102	+ ½
General Asphalt 6s	117	111	116¾	+3¾
General Pet. 5s	102½	102¼	102⅜	+ ¼
Humble Oil & Refg. 5½s	103	102¾	102¾	+ ¼
Humble Oil 5s	100½	100½	100¼	— ¼
Mid-Cont. Pet. 6½s	105	104⅞	105	+ ⅛
Pan Amer. P & T 7s	105½	105⅜	105⅜	0
Pan Amer. P & T cvt. 6s	104	103½	103½	— ⅜
Pan Amer. P & T 6s	95	94⅜	95	+ ½
Pierce Oil Corp. 8s	104½	104½	104½	— ⅛
Pure Oil 5½s	100½	100	100¼	0
Simms Pet. cvt. 6s	108	107½	107¼	—1¼
Shell Union Oil 5s	99	98½	98¾	— ¼
Sinclair Con. Oil Col. 7s	101	100	100¾	+ ¼
Sinclair Con. Oil con. 6½s	98¾	98	98¾	0
Sinclair Con. Oil 6s D	98½	97¾	98	+ ⅛
Sinclair Crude Oil 6s	100	100	100	0
Sinclair Pipeline 5s	94¾	94¼	94¼	— ¼
Skelly Oil 5½s	95¼	94⅜	95¼	+ ¼
S. O. of N. Y. 4½s	97⅞	97½	97⅞	— ⅛
S. O. of N. J. deb. 5s	104	103½	104	+ ¼
Union Oil of Calif. 6s-A	109¾	109¾	109¾	+ ⅞
Union Oil of Cal. 5s C	100	99½	100	+ ½